MAY 25 1925
Medical Lib

HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

Published by the American Medical Association
535 N. Dearborn St., Chicago

June, 1925 *25 Cents*

Do Your Feet Hurt?
Eleven Exercises for Business Men
Developing a Sanitary Conscience

"We are advertised by our loving friends"

Mellin's Food—A Milk Modifier

Essential Food Elements

In the modification of milk with Mellin's Food there is nothing intricate or difficult, for this system of infant feeding is a simplified one, easily understood and readily applied.

Infants who are fed day after day upon a diet prepared according to this simplified system will receive food that nourishes every part of the body, for all formulas when properly prepared contain the essential food elements, of a character and in amounts to satisfy the nutritive needs of early life.

Mellin's Food Company, 177 State Street, Boston, Mass.

HYGEIA, a Journal of Individual and Community Health, is published monthly by the American Medical Association, 535 North Dearborn Street, Chicago, Ill. Yearly subscription price, $3.00; for Canadian postage add 30 cents, foreign 50 cents. Volume 3, Number 6. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103, Act of October, 3, 1917, authorized March 21, 1923.

HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

Published by the American Medical Association
535 North Dearborn Street, Chicago

VOLUME 3 — JUNE, 1925 — NUMBER 6

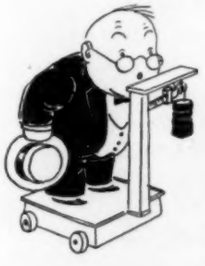
WHO'S WHO IN THIS ISSUE

SEWARD C. STALEY, author of the "Illini Eleven" exercises recommended for business men, is assistant professor of physical education at the University of Illinois. DR. LOUIS GERSHENFELD of the department of bacteriology and hygiene, Philadelphia College of Pharmacy, continues in this issue his series on exterminating household insect pests. DR. CAREY P. MCCORD, sanitarian, is connected with the Industrial Health Conservancy Laboratories, Cincinnati.

DR. PHILIP LEWIN, who gives the practical exercises for the feet, is assistant professor of orthopedic surgery of a leading western medical school. DR. JAMES J. WARING is a western physician, specializing in urology. ETHEL M. HENDRIKSEN, who is now devoting most of her time to a study of ventilation, was formerly executive secretary of the Tuberculosis and Public Health Association of Rochester and closely connected with nutrition and health camp work. EDITH LOCHRIDGE REID, free lance writer on subjects of interest to mothers, has children of her own and thus speaks from experience.

MERLE PERRY, R.N., has practiced nursing for thirteen years and, like many of her profession, is a keen observer of human nature. AGNES MORRIS directs the bureau of child hygiene of the Louisiana state board of health. HENRY COPLEY GREENE is the author of many health articles and radio addresses; he was until recently connected with the Boston Metropolitan Chapter of the American Red Cross.

DR. E. P. LYON is connected with the medical school of the University of Minnesota.



Food, After Forty

Mr. and Mrs. Fat and Forty—we have for July an article you cannot afford to miss. It tells you what foods you should eat and in what amounts they should be eaten.

Mary Swartz Rose, the Columbia University expert on diet, has been making a study of the food habits of the prosperous citizen who has passed forty. What she has to say is written in a humorous vein, but it is not to be taken lightly.

Contributions to HYGEIA *are considered, and, if accepted, paid for. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to* HYGEIA, *535 North Dearborn Street, Chicago, Illinois.*

CONTENTS

COVER—LIVE IN THE OPEN; PREVENT TUBERCULOSIS
Poster by Golda Mintz, Washington Irving High School, New York, submitted in HYGEIA *health poster contest.* — PAGE

FRONTISPIECE—IN OLD PEKING — 304
Grace W. Wilson

ELEVEN EXERCISES FOR BUSINESS MEN — 305
Seward C. Staley

RIDDING THE HOUSEHOLD OF INSECT PESTS (PART II) — 311
Louis Gershenfeld

DEVELOPING A SANITARY CONSCIENCE — 313
Carey P. McCord

DO YOUR FEET HURT? — 317
Philip Lewin

HYGIENE FOR THE SMOKER — 320
James J. Waring

HAPPINESS IS HOW YOUR HEART IS — 323
Sophie Boucher

THE WORST HEALTH FAD OR FRAUD I EVER FELL FOR — 326
Prize Letter Contest

HEALTH CAMPS FOR CHILDREN — 329
Ethel M. Hendriksen

GIVING CHILDREN TRUE HEALTH IDEALS — 335
Edith Lochridge Reid

HUMAN NATURE IN THE HOSPITAL — 337
Merle Perry

THE FAMILY WON'T "PLAY UP" — 340
Agnes Morris

REMEMBER THESE MEN — 341
Henry Copley Greene

THE SPLEEN—AN UNSOLVED MYSTERY — 342
E. P. Lyon

THAT MYSTERIOUS X-RAY — 343
Leo M. Davidoff

DO YOU FRECKLE? — 344

PLAIN FACTS ABOUT HEALTH AND DISEASE:
Health News of the Month — 345
Laughing at the Volstead Act — 346
Big Brains and Little Brains — 347
Two Asthma "Cures"—Rinex and Raz-mah — 347
Poisoning from Fireworks — 348

IF YOU'RE WISE, YOU'LL EXERCISE — 349
John T. Lemos

BOOK REVIEWS — 350

HEALTH NEWS AND VIEWS — 351

QUESTIONS AND ANSWERS — 356

CURRENT HEALTH ITEMS — 360

Copyright, 1925, by the American Medical Association. All rights reserved.

Yearly subscription price, $3.00; for Canadian postage add 30 cents; foreign, 50 cents.

A Chinaman dwelt in a blue bungalow
With his daughter Sing High and his daughter Sing Low.
These two charming ladies could prettily sing,
There was no such sweet music in all old Peking.

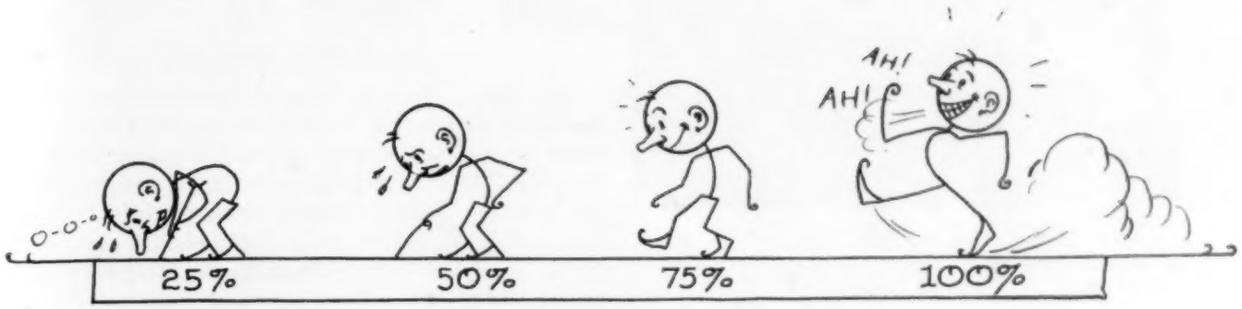
A wicked old man came the daughters to woo;
He lived in Shanghai, and his name was Ka-Choo.
He would sneeze "Ka-Ka-Choo"; "Ka-Ka-Choo" would he sneeze
Until terrible tears would roll down to his knees.

Whenever he came to the blue bungalow
Where resided Sing High and her sister Sing Low,
His announcement would be a terrific "Ka-Choo."
And soon the two girls would be *Ka*-Choo-ing too.

Now every one knows you can't sing with a cold,
But their old Chinese father would make them, and scold
If Sing High would sing low, and Sing Low would sing high;
But they couldn't sing natur'ly when they would try.

One day a wise doctor came up from the South
And forced old Ka-Choo to cover his mouth
Whenever he sneezed; *now* when the girls sing
There is no such sweet music in all old Peking.

GRACE W. WILSON.



Eleven Exercises for Business Men

SEWARD C. STALEY

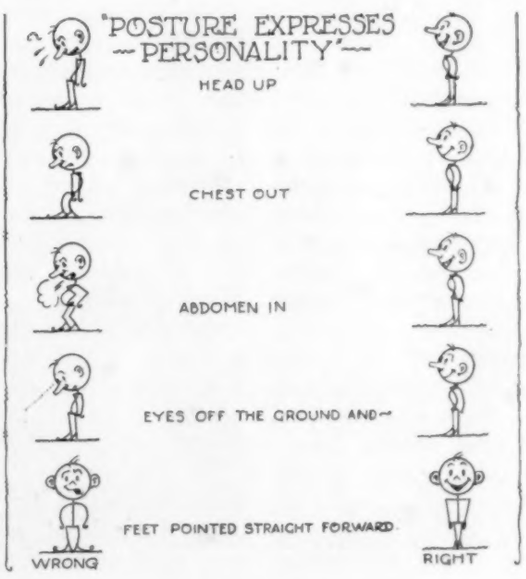
HEALTH may be defined as the functional state of the organism or the operating condition of the body. It may be good or poor. When the various organs and parts of the body are functioning properly we have a condition known as good health; when any specific organ, group of organs or part of the body is impaired or prevented from working normally we have a condition known as poor health. Health, thus, is a matter of degree; at one end of the scale we have vigorous life or "tip top condition," at the other end, death.

The individual blessed with a good inheritance, obtaining adequate daily exercise, having a nutritive apparatus that functions well, securing sufficient sleep and rest, avoiding bacterial infection and so on will be in tip top condition. The absence of proper conditions, brought on by neglect, inattention and carelessness tend to produce lowered health.

It should be noted, however, that physical activity is the one outstanding positive factor in health production and maintenance. Whether the inherited equipment is bad or good, we must accept it. Through hygienic living we can develop this endowment to the limit, but the ultimate capacities are quite definitely fixed. Other factors, such as the presence or absence of drugs and stimulants, the mechanical placement of the organs and parts of the body and body cleanliness, are but accessories to the matter of health. Muscular activity is more important than all of these; it is the developmental source of health.

Hetherington summarizes this idea as follows: "This developmental source of health is the one constructive factor. Food, for example, is an essential for existence, but eating the best food develops no skill or talent. Correcting eye defects and removing adenoids eliminate handicaps on normal growth, but the correction and removal develop no latent capacity. The developmental activities alone draw out latent resources in the organism. All other factors are in contrast merely favorable or unfavorable to health."

Exercise or physical activity has long been recognized as a tremendous factor in the health program but with the recent rapid tendencies toward urbanization, the mechanization of industry and agriculture, and the war revelations on the physical condition of young men, it has received increased attention. Certain individuals, who for convenience we can call physical culturists, have capitalized this state of affairs. Through making certain appeals that can be readily explained psychologically, they have been commercially successful in their work.



In the first place by the copious use of pictures of well muscled men and beautiful girls, they make a direct ap-

Exercise II of the "Illini Eleven" is the Twister. In it one sits flat on the floor with feet apart and twists the trunk from right to left.

A position in the Leg Lifter exercise, which is No. VII.

Here is one that isn't so easy. It is the Dipper (No. IX) and in it only hands and toes touch the floor.

peal to normal human instincts. Owing to a racial hangover from the days when physical prowess was the dominant factor in the struggle for food and sex, mankind has an instinctive admiration and respect for physical strength and skill. In this connection, note the hordes that flock to college athletic contests, prize fights, circus performances and beauty shows. All of us, secretly or openly, admire these qualities and wish them for ourselves.

The second appeal is based on the common misconception of associating health and strength. The lay group—business men and women, industrial workers and others unacquainted with the principles of hygiene, physiology and exercise—have lapsed into a state of mind that conceives of strength and health as parallel conditions, if not one and the same. The strength ideal, evidenced by pictures revealing supermuscled individuals, combined with startling records of feats of strength thus make a powerful appeal to those in quest of health.

No Secret Method to Strength

The third factor, that of holding some secret method or system, makes its appeal directly to the inquisitive instinct. This procedure has been used by mountebanks since the beginning of time. Cults innumerable—religious, social and ethical—have been formulated about this idea. By shrouding their system or method in mysticism, these promoters are using the arts of medicine men, fakers, theists, and others who have special interests to advance. Mysticism has always held a lure that science finds difficult to combat.

The body beautiful and the strength ideal are legitimate up to a certain point. No one questions the desirability of having a strong, vigorous, beautiful body, but to advocate, as some do, muscular development for its own sake is of course ridiculous. The time has passed when man must rely on physical prowess in the struggle for existence and advancement. A moderate amount of development is essential to health, vigor and virility, but to build up strength beyond this point is wasteful and dissipating. The development of muscular monstrosities is totally out of place in this period of civilization.

The health through strength idea has only a germ of truth behind it. Through innumerable generations mankind and his forebears depended on physical prowess for survival. This meant constant vigorous physical activity. The circulatory system, respiratory system, digestive system, nervous system, eliminatory system, and other vital parts were built up and accommodated to this plan of living. And then, with relative suddenness, civilization, bringing with it social protection and machinization of labor, has made vigorous or even moderate physical activity more or less unnecessary. This has even gone so far that in certain social groups physical activity of any sort is looked on with disdain.

But what of the various vital organs and vital systems? It is a principle of organic life that use makes for life and health, abuse makes for destruction, and disuse for decay. So, if the vital organs are to be maintained in a healthy, tonic condition, there must be some exercise or activity. Thus it will be seen that strength does not make health, but the activities used to secure strength tend to produce health by the physiologic results which they induce.

Secret methods are sheer buncombe. It is true that some types of exercises are relatively more beneficial than others, but from the statements the physical culturists present, one is led

to believe that they are in possession of a magic key to broad life and long life that will be revealed when the proper fees are produced. In making these statements the big muscle men play on mass ignorance of commonly accepted physiologic laws.

Physical activity has the effect of increasing metabolism—old cells are broken down, new cells formed, the blood flow increased, respiration increased and other organic functions generally activated. This condition results from all activity in proportion to the vigorousness and the continuity of the work done, and is not the product of any special hidden method or order of activity. Physiologists, hygienists and other scientists have studied these problems for years and up to the present time have discovered no secret methods for the production of health.

If this is true, how can it be possible that ex-pugilists, weight lifters, pseudo-scientists and others have had these revelations.

In a way, the whole situation—the widespread development of physical culturism—reflects on the work done by health and medical organizations. The general public, consciously or unconsciously, has come to recognize the supreme importance of physical activity in health but the medical and health agencies have been somewhat tardy in adjusting themselves to it. Because of the fact that most medical men are trained and spend most of their professional hours in diagnosing and prescribing for pathological conditions, they are disposed to view health from the negative point of view. The thing the world needs and demands is the positive point of view. Reparation, rehabilitation and cure are important and essential, but these should not be overemphasized to the total neglect of constructive health.

Personal acquaintance and intimate relationship with numbers of doctors have convinced me that while most of them can prescribe for disease, few of them can with the same ease prescribe for health. Add to this the fact that health agencies have not adequately educated the public to proper health procedures and it is not difficult to understand why people turn to these "Guardians of Secret Methods" who promise health, vitality, beauty and strength.

What type of activity, then, should be used? The best form of exercise for the juvenile is wholesome play, hunting games, chasing and fleeing games, struggling games and simple stunts. The best type of exercise for the adolescent is to be found in the organized games, football, baseball, basketball, volley ball, track and field athletics, soccer, playground ball, combative contests, such as fencing, boxing and wrestling, acrobatic stunts, hiking and camping.

The best type of exercise for adults is to be secured through golf, tennis, volley ball, hand ball, playground ball, riding, boating, fishing, hunting, hiking, camping. The peculiar advantage of activity of this sort is that it is for the most part done out of doors and is mentally as well as physically wholesome and stimulating.

It so happens that a great number of adults, either temporarily or more or less permanently, are prevented from engaging in activities of this sort. Business pressure, lack of facilities, lack of funds, inconvenience, all combine to interfere with participation in sports. Individuals in this situation face two alternatives: either they must forgo all exercising or must perform some calisthenic exercises at home. Election of the latter is by far the better course.

My own investigations, however, reveal the fact that homemade drills—drills made up by individuals for their own use—are not so good as they might be. Lack of knowledge regarding the organization and construction of calisthenic exercises accounts for this.

As an aid to such persons the physical department of the University of Illinois has shaped up a drill which has been fittingly named the "Illini Eleven." It offers no special advantages; a dozen drills equally good could be readily formed by a good calisthenic teacher. Done properly, it will produce good hygienic results and should improve posture. It is offered to those who are unacquainted with good exercises and want something of the kind.

"ILLINI ELEVEN" HEALTH HABITS

1. Execute the "Illini Eleven" daily.
2. Play some adult athletic game three times each week.
3. Spend one afternoon in the open each week.
4. Walk a brisk mile or two daily.
5. Breathe deeply several times daily.
6. Sleep with windows open eight hours daily.
7. Eat some fruit and coarse vegetables daily.
8. Chew all food well before swallowing it.
9. Drink two quarts of water daily.
10. Have a bowel movement once or twice daily.
11. Take a bath and a vigorous rub daily

and

Celebrate your birthday by having a health examination.

Here Are the "Illini Eleven"

THE "Illini Eleven" are designed for adults. They are scientifically sound and the product of years of study. Used daily they will increase your organic vigor, muscular strength, body suppleness, motor reaction and body posture.

Pin these exercise pages on your bedroom wall and practice the exercises until you have learned the "Eleven" thoroughly.

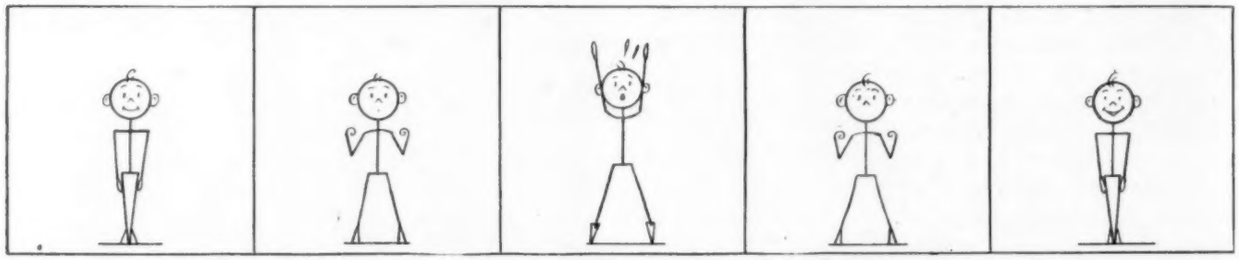
Learn to do the exercises correctly, vigorously and in good posture. Don't cheat yourself.

In the beginning repeat each exercise the minimum number of times; then gradually increase the dosage.

Perform the exercises with enthusiasm. Count out loud; hum a snappy tune; grunt, puff and stamp about. Get the whole family in on the fun.

Go through the entire "Eleven" without stopping. The investment of ten or twelve minutes of your time in this way cannot help but pay big dividends.

I. THE STRETCHER (Min. 4; Max. 10)



Starting position —standing erect

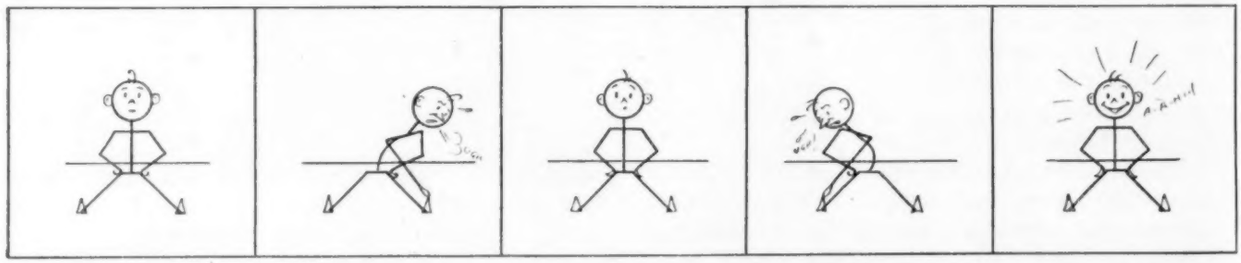
1. Right foot sideward, hands at shoulders (pull elbows down)

2. Hands upward, rise on toes (stretch)

3. Hands at shoulders, heels normal (pull elbows down)

4. Right foot normal, hands normal

II. THE TWISTER (Min. 6; Max. 15)



Start. pos.—sitting on floor, hands on hips, feet apart (chest high)

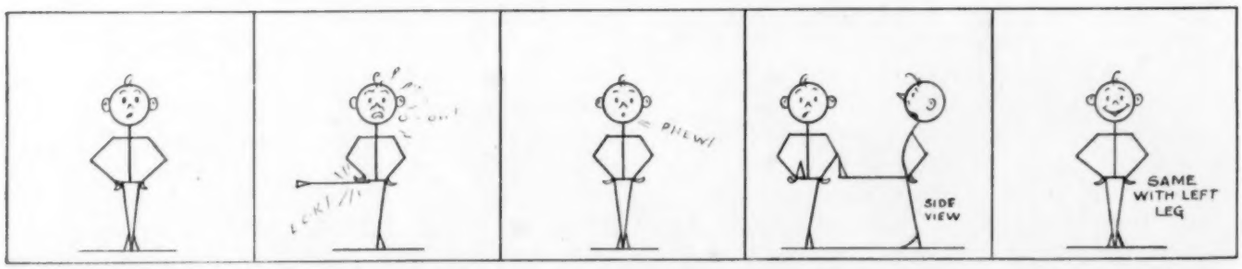
1. Trunk turned L., R. hand on L. toe

2. Trunk normal R. hand on hip (chest up)

3. Trunk turned R., L. hand on R. toe

4. Trunk normal, R. hand on hip (chest high)

III. THE KICKER (Min. 6; Max. 12)



Start. pos.—standing erect, hands on hips

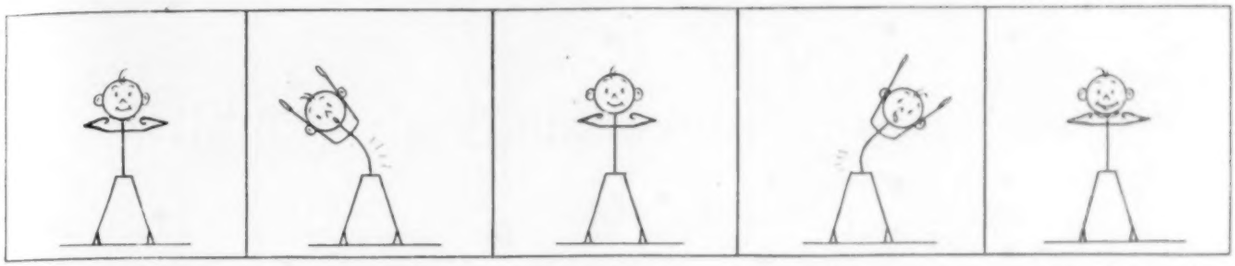
1. R. foot raised sideward (kick high)

2. R. foot normal

3. R. foot raised forward (kick high)

4. R. foot normal

IV. THE SIDE BENDER (Min. 6; Max. 15)



Start. pos. — feet apart, hands at neck (elbows back)

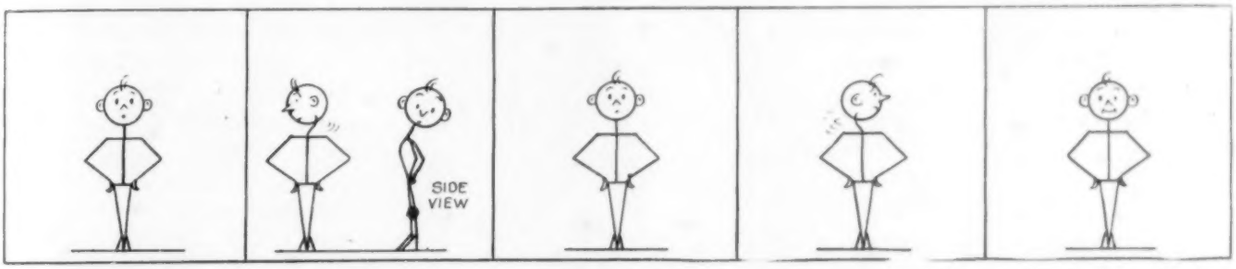
1. Trunk bent R., hands upward (stretch)

2. Trunk normal, hands at neck (elbows back)

3. Trunk bent L., hands upward (stretch)

4. Trunk normal, hands at neck (elbows back)

V. THE NECK PRESSER (Min. 6; Max. 15)



Start. pos.—hands on hips

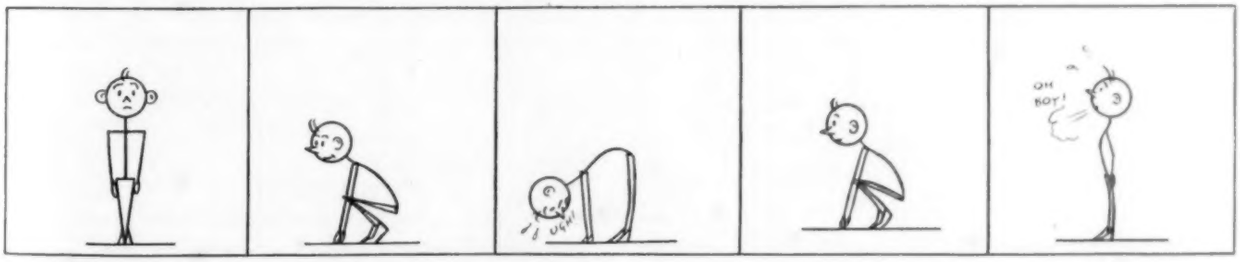
1. Head turned R. and drawn backward

2. Head normal (don't let head sag)

3. Head turned L. and drawn backward

4. Head normal (don't slump)

VI. THE SQUATTER (Min. 6; Max. 15)



Start. pos.—standing erect

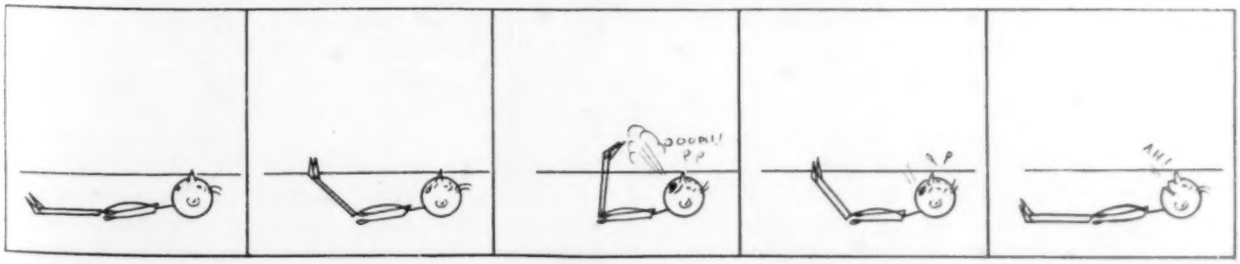
1. Squat on floor (hands near feet)

2. Knees straight (keep hands on floor)

3. Squat on floor (same as count one)

4. Stand erect

VII. THE LEG LIFTER (Min. 6; Max. 15)



Start. pos.—back on floor

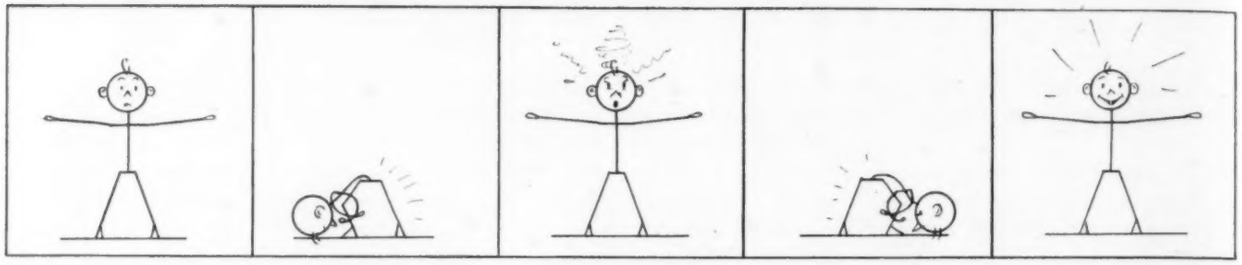
1. Feet half upward (knees kept straight)

2. Feet upward (keep hips on floor)

3. Feet half upward (same as count one)

4. Feet on floor

VIII. THE COMPRESSER (Min. 6; Max. 15)



Start. pos.—feet straddle, hands sideward

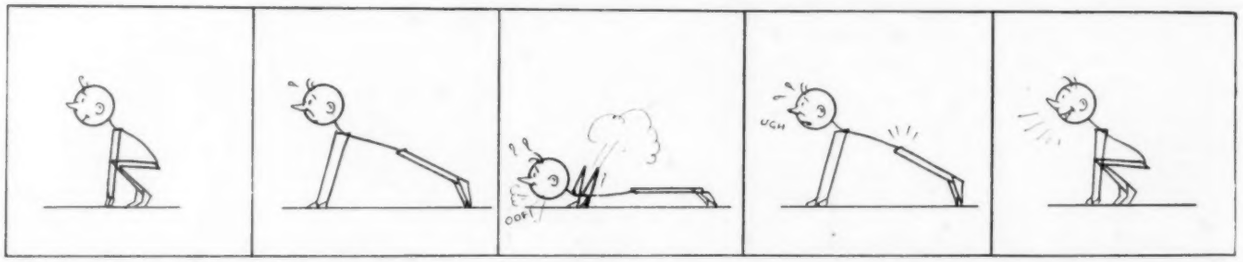
1. Trunk bend forward, arms about right knee

2. Trunk normal, arms sideward

3. Trunk bend forward, arms about left knee

4. Trunk normal, arms sideward

IX. THE DIPPER (Min. 6; Max. 15)



Start. pos.—squat on floor (hands near feet)

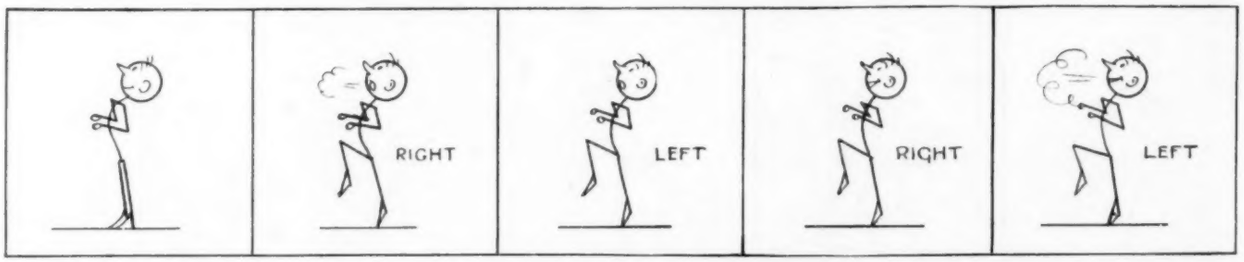
1. Feet backward (trunk and legs straight)

2. Elbows bent (only hands and toes touch floor)

3. Elbows straight (same as count one)

4. Squat on floor (same as starting position)

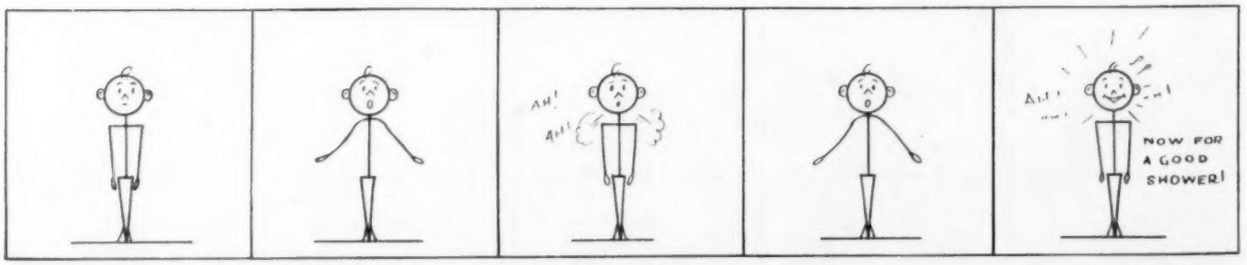
X. THE HIGH STEPPER (Min. 10 steps; Max. 20)



Start. pos.—standing erect, fists clenched

Run in place. (Raise arms and knees vigorously)

XI. THE EXPANDER (Min. 5; Max. 10)



Start. pos.—standing erect

1. Rotate hands outward and inhale (look up)

2. Hands normal and exhale (don't droop)

3. Again

4. Now for a good shower!

Ridding the Household of Insect Pests

LOUIS GERSHENFELD

THOUGH all precautionary measures are observed in preventing the formation of breeding places, household insect pests find their way into the home either through their migratory instinct or in materials brought from the outside. Premises therefore may be temporarily invaded. Determined effort is required to eradicate these invaders; otherwise their numbers will increase with almost unbelievable rapidity.

Herbert L. Block

It is important to kill the fly, but it is more important to destroy his breeding place.

Unfortunately, an endless variety of control methods have been introduced. A countless number of destructive agents have been exploited and have been advocated as part of the proper campaign against insect pests. If the destructive agents offered for sale by some concerns and the methods of eradication advertised by others were only partially as effective as the results of the salesmanship or advertisements generally introduced, we would long since have been rid of these pests.

Methods for the elimination of insect pests from the home must be rigidly and intelligently enforced. Most failures are due partially to the use of inefficient methods, but more frequently to half-hearted effort and easy discouragement, resulting in a haphazard and an indifferent technic in enforcement.

Natural Enemies of Little Aid

Certain natural enemies of these pests are to be found in or around our homes. The house centipede and the common little red house ant prey upon bedbugs. Flies are destroyed by house centipedes, ants, certain beetles, fungi and even by birds and bats. Birds, fish, dragon flies, spiders, toads, beetles and other parasites devour mosquitoes.

One can readily see that these natural enemies are as unwelcome as the pests themselves. They have but a limited use, if any at all, in a program to control effectively household insect pests. They cannot be relied upon to do the work for us. Mention is made of the existence of natural enemies merely to inform the reader of the possibilities that exist in replacing some pests, especially those affecting crops and plants, with their natural enemies. A specific and important instance of this kind is found in the successful attempts that have been made in eradicating the Japanese beetle, so destructive to crops, by various natural enemies that are not destructive to the crops.

The use of baits, adhesive papers, traps, repellents and poisons to control and destroy insects that have gained access to houses is common, and will be considered first. Though at times desirable, these frequently are but temporary conveniences. Unfortunately some of the most efficient of these agents can rarely be used in a home. Baits containing various poisons are most effective for the destruction of many of these pests. They can only be used where children and domestic animals are not about, and only by responsible individuals.

Poison Baits for Ants, Flies and Roaches

As an effective poisonous bait for ants, moisten a sponge or a piece of bread with a syrup made by dissolving an ounce of sugar and ten grains of arsenate of soda in two ounces of hot water. Some ants may even carry the poisoned liquid back to the nest, resulting eventually in the destruction of the entire colony. The employment of this effective bait, if used with care, may replace the applications of the many insecticidal preparations, which, principally on account of the odor they impart, cannot be conveniently employed.

Poison baits and poison preparations for flies are also common. Some of the latter are made with compounds of arsenic. The use of the latter, as mentioned, is attended with danger. In place of these, one will find that a weak solution of formaldehyd is at times effective.

Such a preparation can be made by buying some formalin or solution of formaldehyd. One fluid ounce of this added to a quart

of milk or sweetened water can be conveniently placed in glasses, saucers or small shallow pans in the doorway, in the pantry or wherever the flies are found.

The U. S. Public Health Service has recommended the use of a solution of salicylate of soda, made by dissolving one ounce of the powder in a quart of sweetened water. A piece of bread or other foodstuff may make the bait more attractive.

Some have advocated the placing of phosphorus paste on the inside of small tubes of folded cardboard or paper as a bait for pests, particularly roaches. Small dishes filled with mixtures of equal parts of flour and plaster of Paris, where roaches and other insects appear, have been found an effective bait. It is claimed that the insect is soon compelled to drink water, which results in the hardening of the plaster of Paris and death of the insect.

If baits are to be employed, they should be placed in environments frequented by the insect pests. Always be sure to place them in compartments inaccessible to children and pets. It is desirable that the baits should be prepared freshly and distributed freely at frequent intervals.

Traps for Flies and Roaches

The trapping of certain house insects is an effective procedure and is highly recommended where the use of poisons seems inadvisable. This method should be more commonly used against flies than adhesive and other types of fly papers or the common method of swatting. The constant appearance of fly papers in or about a home or food shop tends to leave an unpleasant impression upon visitors and patrons. In like manner, swatting the fly not only does not kill the eggs, but it assists in the distribution of any bacteria that may be present on the fly. By the use of baits or fly traps, much more efficient results are obtained with the expenditure of less energy, and the surroundings are kept more attractive.

Traps are generally so constructed that the particular insect may easily get into them, but cannot escape. Traps for roaches and especially for flies have been found very effective. Many types are on the market, but home-made devices are easily constructed. As a bait both for flies and roaches, a mixture of three or four parts of water and one part of fermented molasses proves very attractive. The trap is baited daily and the catch is destroyed by treatment with boiling water. It is important that traps employed for flies should be constructed so as to permit plenty of light to appear from the top, as otherwise the bait may not be seen.

Various devices for catching fleas and mosquitoes are available, but are not employed extensively, as they have not given satisfactory results.

[*To be continued in July issue.*]

Prize Contest for Teachers

"HOW I Use HYGEIA *in My Class Work" is the subject of a letter contest for grade, high school and college teachers. Letters are limited to 1,500 words.*

The contest ends July 20, 1925, and the prize winning letters will appear in the September and October issues.

First prize	*$50.00*
Second prize	*25.00*
Third prize	*15.00*
Fourth prize	*10.00*

Five letters will be given honorable mention. The author of each letter so recognized will receive a year's free subscription to HYGEIA.

Developing a Sanitary Conscience

CAREY P. McCORD

IN ONE of the factories I often visit, Old Newt, the elevator man, always keeps the same safety poster on his bulletin board. This long used and now dingy poster bears the statement, "The best safety device is a careful man." Many years of sanitary practice and investigation prompts me to attempt to paraphrase Old Newt's slogan as follows: *The best industrial sanitary device is a man with an intelligent sanitary conscience.*

Into industrial sanitation there have come kata-thermometers, sling psychrometers, anemometers, illuminometers, dust counters, hoolamite tubes and similar devices. All of these are excellent appliances. They afford valuable information where their use is indicated. Often, however, I have loaded up my car with these instruments and have gone for a factory inspection trip, only to find that what really was needed were mops and shovels, and enduring patience to try to get over to the working groups simple sanitary facts. In this statement there is no implied villification of the apparatus and tests sanitarians utilize.

In large factories employing plant engineers and draftsmen, sanitary achievements may be planned, devices may be installed and worked to the good of every person in the plant without the necessity of workers cooperating in their operation or having knowledge of their mechanism. More often, however, it happens that the factory is small, the workers few, the number of technical executives limited and overworked.

It is common knowledge to the industrial physician and the industrial hygienist that the small plant proportionally harbors a far greater quantity and diversity of health and safety hazards than the large plant. The two examples now cited should be obvious and convincing.

The plant having 500 employees is warranted in the installation of a water cooling system with automatic temperature control, with drinking fountains, suitably placed, each to accommodate about thirty employees. The plant of fifty employees is, however, not justified in this considerable outlay and resorts to the use of various types of stand coolers, which increase the probability of the common drinking cup.

In the large metal trades plants the hazards from "cutting fluids" may be reduced to a minimum by sterilization of the "cutting compound" and by the removal of metallic particles through centrifugalization or magnetization. In the small machine shop the hazard to the individual from "cutting fluids" is just as great, but the considerable expense entailed in such installations is usually regarded as excessive.

The small factory is the rule in this country. Of our 250,105 plants, 97.8 per cent. have fewer than 250 workers and 90 per cent. have less than fifty workers.

Particularly in these small plants does the sanitary situation rest on the intelligence, the loyalty, the integrity, the sanitary conscience of the individual worker. The general office may have the best of plans for sanitary achievements, but sanitary facts are largely determined by workers.

A sanitary conscience for an industrial workman is that feeling within himself that causes him to accept direct personal responsibility to the consumer of his product, to his employer and to his fellow workmen, to carry out clean and healthy practices in his work. Workers should seek such a standard.

Photos by W. C. Wright & Co.

In this food product workroom, the "sanitary conscience" is present. Floors, walls, ceilings, lighting and machinery all favor a clean food product. It would be better, however, if the workers wore tight fitting caps over their heads. The type of stool being used constitutes a fatigue hazard.

In food production there is a direct obligation to the consumer. Only slightly less is the obligation in other trades. The plumber who knowingly leaves a leaky gas connection, or the electrician who fakes the length of his loom are prostituting the trust placed in them. Sanitary obligations to fellow workmen are constantly present in every phase of industry.

Just what is meant by the elusive term "sanitary conscience" may become clearer through stories of its action or its absence.

Absence of Sanitary Conscience

A young girl developed a sore throat and was suspected of having diphtheria. She was advised to stay in her room until a laboratory diagnosis could be made by her family physician and the board of health. She disregarded this order and returned to work. She gave diphtheria to three girls in her department, one of whom died. This girl had no sanitary conscience.

In a candy factory a handful of plaster fell from the ceiling into a bucket of candy. The plaster lay on top of the candy mass and might easily have been skimmed off. The foreman saw the whole affair. "It's nothing but dirt," said he, "can't hurt anybody, go ahead and run it through." That foreman had no sanitary conscience.

The cook at the plant cafeteria left the ice box open, and the next day's meat supply reached a questionable state. "Serve it up and if they kick too hard give them something in the place of it." Forty men had a diarrhea. That cook had no sanitary conscience.

CARELESS BAKER TO BE GIVEN FINAL WARNING

A loaf of bread with a partly burned cigaret baked in it was shown to the board of health Wednesday by Dr. William H. Peters, health commissioner. The loaf was picked up in a store by a deputy food inspector. It was made by a baker who has had considerable trouble with the board of health regarding the cleanliness of his plant.

This story from the Cincinnati *Post* of February 11 showed that some worker had no sanitary conscience.

An elevator girl in a department store was subject to "falling spells." She knew this but told no one about it. She fell during the crowded shopping season of Christmas, while operating her elevator. The automatic control stopped the elevator at the roof. No one was hurt but every one was frightened. This worker had no feeling of responsibility.

In all the plants in which the above distressing occurrences took place, there were continuous efforts to secure proper conditions—good lighting, good ventilating systems, clean toilet rooms, cafeterias; in fact, the managements prided themselves on their superiority. They fell short because the workers themselves were not intelligent participants in the scheme of sanitary and safety protection.

Examples of Sanitary Conscience

The best examples of sanitary conscience—highly developed out of raw material—are found in those dairies producing "certified milk." Bacteria counts are usually made daily so that there is a check on the precise condition of milk at all times. One unclean milker may ruin the entire lot of milk. Usually the workers are unskilled, but associated with them is a highly trained dairyman. His status, as well as the well-being of babies, is in the hands of every worker who cares for barns, cows, utensils, bottles or chilling processes. Every avenue of trouble is sought out and the men warned as to protection. Soon that feeling of responsibility to the "boss" and the babies permeates the whole crew.

I have seen men in the milking crew who would cry when a score card brought news of a high count of bacteria. Such a conscience does not come with one fell swoop, as religion is said to come to some folks. A sanitary conscience is the fruition. Certified milk cannot be produced without sanitary consciences.

Not long ago a manufacturer came to an industrial health laboratory bearing a sheet of advertising copy. The copy, in large letters, told of the high purity of raw materials utilized in the factory's products, of the spotless work conditions, the essence of care in every step of manufacture. This manufacturer said to the laboratory staff: "Is all of this true, or is it just the fancy of our advertising agency? Before this goes out, these statements must represent factory facts and not promotion fancies. I want to go to my buying public with clean hands so that I may sleep well at night."

Here was a real sanitary conscience. As might be expected, the investigation revealed a plant that needed only minor changes in order to be certified as having high standards.

Into the same office there came a man of the laboring type, asking help in getting a job. The laboratory men asked where he had been at work and why he left. They heard this story:

"I have just quit my job at the X factory, where they make pies. The stuff they fill those pies with ain't food at all; it just looks like it is good to eat. I am a laboring man and know how hard it is to get money enough to keep going. It's wrong for anybody to make pies like that to sell to us poor folks. So I quit."

This man was no sanitarian, no dietitian; he even may have been wrong in his notions, but at least he had a sanitary conscience.

The sanitary conscience may not in truth be an instrument of precision in factory work but precision is approximated if a sense of guilt is regularly acquired when sanitary infractions

take place. Moreover, nobody in the factory should try to get a corner on the sanitary conscience; the president, the general manager, the purchasing agent, the foreman, the workmen, the office boy—all need one.

The Ungeared Sanitary Mind

Not long ago the industrial health laboratory of which I speak was called upon to inspect a food factory. The works manager greeted the sanitarians warmly. He beamed with satisfaction at the prospect of his workplace being looked over. His attitude was one of justified pride in labors well achieved. He told them of "food untouched by hands," of groups of contented, joyous workers, of required uniform attire, of a factory having one half of its wall space given to windows. As they sat in his office downstairs, he told them of the pain he would suffer if at any time any defect might be found in his procedures.

With the works manager still glowing in his S. D. W. P.—sense of duty well performed—the sanitarians started through the factory. Certain machines that coated the food products were the pride of the guide, hence the first objective. The men were all set up for a sanitary thrill; they got the thrill but a different one than looked for. At these machines they found a girl picking up from the floor pieces of waxed paper and putting them on the belt to receive the coated product. Another girl took these laden papers and again laid them on the dusty, dark cooling room floor, in which every foot of space was utilized. Food was on the floors, on chairs, on boxes, on piles of unusued trays. Aprons worn by the women workers were trailed across the chilling products. Back at the coating machine a worker was filling the syrup chamber. The lid had been taken off and put on the floor at the worker's feet. The bucket used for transporting the syrup was covered with the leavings of many weeks' service.

The health workers looked for the spotless uniforms they had been told about. No two were alike, but all were of a dark color. Without dismay, the works manager told them that the dark uniform did not show the dirt accumulated so quickly, that since the uniforms were not heavy, workers were permitted to wear sweaters over them; that it was regarded as unnecessary to have the uniforms alike, every girl choosing her own design or bringing into the factory any house dress available. Moreover, the laundering of these so-called uniforms was left to the resources of the individual girl.

This story might be continued, to relate about the man who alternately cleaned toilets and packed unwrapped foods; of the man with eczema of his hands, who continued his food work. A continuation of this story is not helpful—the point is made. Sanitation must be a factory fact and not a wordy fancy.

Clean and ample toilets and wash basins are important stimuli in the education of workers in sanitary practices.

The manager's eager desires for sanitation were not geared up with an intelligent appreciation of sanitary requirements. He lived in a sanitary fools' paradise.

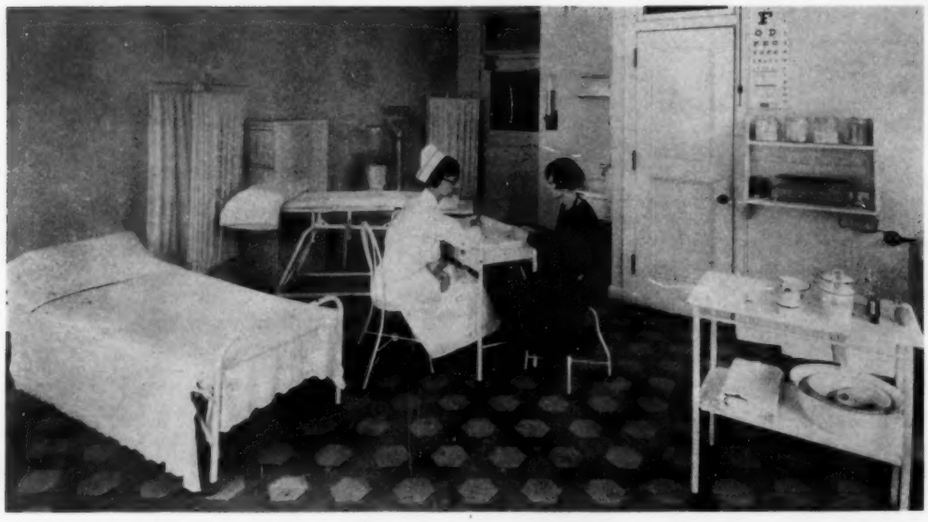
Sanitary Codes Often Baffling

Some sanitary codes are bewildering compilations. They may be so broad and all-inclusive as to appear flat and vague. Often they are attended by the technical and the legal to a degree that defeats understanding. The defense may be made that codes are intended only for the use of factory inspectors and the plant engineer or superintendent.

To a foreman a code is likely to prove a source of worry but not a source of help. Despite this handicap, often there is seen the cheering sight of a foreman with code, paper and pencil in hand faithfully trying to grasp the sanitary needs of his department, in order that he and his men may better protect one another and the products they make.

From a certain code applying to dressing rooms this sentence is quoted: "It (the dressing room) shall contain at least six square feet of floor space for every person employed in any one shift, exclusive of office force, up to ten, and two and a half square feet for every additional person." It is hard for us to fathom precisely what is contemplated in this regulation. A responsible factory head might also have this same difficulty.

In another code applying to laundries appears the following: "Where artificial ventilation is a requisite to the maintenance of comfortable



A proper "sanitary conscience" demands good health. This department store last year carried out 11,000 treatments for the protection of the health of workers and customers.

working conditions, an adequate ventilating system shall be installed." Such statements as these leave all sorts of loopholes for the vicious manufacturer as to just what constitutes "comfortable working conditions" or an "adequate ventilating system."

Many codes are group codes and are not specific for individual trades. Bakery codes, for example, are usually included in general food product codes. The "lingo" of these specific trades is highly developed. The language of the baker is not the language of the candy maker. The language of the butcher is foreign to the language of the sandwich shop. The result of such general codes in the hands of some factory managers is confusion and a throwing of the code into the discard, trusting that they can put it over the factory inspector. In short, the possible sanitary conscience may be nipped in the bud for lack of assistance from the sanitary code.

One story will emphasize the limitations of factory inspection and code influence. In a certain city an outbreak of lead poisoning in a storage battery plant led to the employment of sanitarians to devise protection. This factory had operated for nearly ten years. On approaching the factory they found red lead tracked out into the street, they saw it on the windows, in the offices and in the passageways; red lead was everywhere.

No partitions had been erected at any place in the factory. Grinding, mixing, pasting, buffing, forming and assembling, all were conducted in a cluttered hodge-podge of factory work. The sanitarians dug up the specific code for that trade in that state. The code specified a series of protective measures that, if conformed to, would have eliminated all essential hazards, but, unfortunately, the title was so remote to the battery industry as to escape all notice. The executive had never heard of any code. When they inquired about factory inspection, the health workers were told that "since they were so small the factory inspectors for several years had passed them up." As a result every person in the factory (except the office force) who had been employed one month or more exhibited characteristics of lead poisoning.

What was needed in that factory was a presidential sanitary conscience. No person has the right to direct a hazardous industry unless he is in touch with the man-killing procedures of his industry. A proper presidential sanitary conscience will soon generate a sanitary conscience for the superintendent, the works manager and the foreman.

With the aid of a physician they may create for that plant a "primer of sanitation" that may be drilled into every worker. When a foreman is seen to sit down among a group of workers at lunch and eat a cheese sandwich grossly smeared with red lead, the factory does not need a dust counter—it needs a sanitary conscience and probably a new foreman.

Build Up the Sanitary Conscience

Legislation, codes, inspections, penalties and instruments of precision have their places in plant sanitation, but the part that such things play is not enough. The essence of opportunity is the sanitary mind of the individual worker and especially the individual foreman. A company of goats commanded by a lion may become a company of lions.

Concepts of proper sanitary practices are not inborn gifts. The contrary is apt to be the rule. The mind of the young worker, the apprentice, and to a lesser extent the mind of every individual worker is an open page on which may be written many helpful things. There is a need for the capitalization of the individual's mind, the fostering of individual sanitary and hygienic practices, and the painstaking education of every worker in the acquirement of a sanitary conscience. No mechanical devices may fully eliminate this human endeavor in the procurement of sanitation.

Do Your Feet Hurt?

PHILIP LEWIN

MAN was intended to walk barefooted. Civilization, however, has brought hard floors of wood and tile, cement sidewalks and asphalt streets. The Indian guide in the North woods who travels many miles daily may have his feet almost disabled in one or two days on the city walks and streets.

Today barefoot locomotion should be indulged in only in the sand or water. Bedroom sandals or ordinary slippers, as a rule, are harmful, and should not be used except to exercise the feet. There is considerable danger of picking up ring worm of the foot by walking barefooted, and this is especially true in places where large numbers of people walk without shoes.

Since our modern civilization demands that we wear shoes, what is the best type of shoe to wear? From the point of view of foot hygiene the evidence is in favor of the high rather than the low cut shoe. Lace shoes are, as a rule, preferable to button. There has been much discussion in regard to the shank of the shoe, as to whether it should be flexible or rigid. Individuals without foot troubles may do very well in flexible shank shoes. Those who have foot troubles correctable by exercise only will do well in flexible shank shoes, but for that large number who need both exercise and support a rigid shank shoe is, at least temporarily, of much greater value.

The shoe should have a round toe, a medium width shank and should be made over a last with a straight inner border. The height of the heel should be within reasonable limits, for both extremes are undesirable, not only because of the effect upon the feet, but especially because of the effect on the back.

Every individual should make it a practice to change his shoes during the day if possible. It is advisable too that the same pair of shoes be not worn two days in succession. Shoe trees or shoe forms are valuable aids in keeping footwear in shape. Rubber heels are of distinct advantage in minimizing repeated shocks to the feet, legs and spine. Metal arch supports as a rule are highly inadvisable because they act as props or crutches and do not increase the power of the supporting structures of the foot.

It is of great importance that stockings fit well. Those that are too short have a tendency to produce ingrown toe nails, metatarsal arch trouble, hammer toes and bunions, while those that are too large curl up, form wrinkles and cause uneven pressure, which may result in irritated areas. Stockings should be changed daily.

Circular constriction of the leg, such as is caused by tight garters, is harmful to the circulation. This is true whether the constriction is caused by a circular garter or by rolling stockings in a hard ridge or knot.

One should bathe the feet once each day. The soap used should be of a non-irritating variety and the foot should then be dusted with a non-irritating simple powder. For tired feet the addition of small quantities of salicylic and boric acid may be helpful.

Contrast baths are of distinct value in improving the circulation of the soft tissues of the foot and leg. Contrast baths are carried out as follows:

> Obtain two buckets, each large enough to contain both feet. Fill bucket No. 1 about two thirds full of warm water, and bucket No. 2 two thirds full of cool water. Sit alongside of the buckets. Place both feet in the warm water for exactly one minute. Remove feet and place in the cool water for exactly one minute. Alternate in this manner for ten minutes, i. e., five minutes in each bucket. This routine should be carried out twice a day, increasing the contrast of the water gradually from day to day.

If one can spend a few minutes each morning and night massaging the feet he will find it an excellent tonic. Cold cream, cocoa butter, oil of wintergreen, or an analgesic ointment may be used in the massage. One should not rub the skin but should employ a rotary movement using the thumbs.

"Rheumatic" pain in the feet may often be relieved by hot applications consisting of flannel dressings wrung out of a hot saturated solution of Epsom salt.

For the young girl's foot there is no exercise of greater value than ordinary ballet dancing. It is valuable locally for the feet and generally for the entire body in developing balance, poise and general muscle tone. Toe dancing should not be begun before the age of ten years. Ballroom dancing is excellent exercise but in some cases may produce symptoms of metatarsalgia, i. e., pain in the metatarsal or front arch of the foot. Ice skating and roller skating are excellent exercises for the feet and legs.

For the abnormal foot with weakness of the supporting structures of the longitudinal and transverse arches, a great many special exercises have been prepared. Some of the most valuable are the following:

Longitudinal Arch Exercises

Exercise No. 1.

Stand barefooted with the feet parallel and about 2 inches apart, straddling a seam or a line in a rug. On the count of *One,* the feet are forcibly turned out, so that weight is borne on the outer borders, and on the count of *Two* they are allowed to slowly roll in, but not all the way. This is carried out from 25 to 100 times night and morning.

Exercise No. 2.

Same as No. 1 except that the two big toes are held together and on the floor.

Exercise No. 3.

Standing with the feet straddling a seam in the rug, or a line on the floor, the individual walks across the room with all the weight borne on the outer borders of the feet. This is carried out five times up and back.

Exercise No. 4.

The same as No. 3 except that the individual lifts the foot so that it is opposite the other knee, and walks across the room in that way, the so-called "ostrich step." The weight must at all times be borne on the outer border of the foot.

Exercise No. 5.

The subject is seated, holding the foot at a right angle with the leg, and not turned in or out. The exercise is done in four counts. On *One* the foot is forcibly put in the position of toe-drop. On *Two* the foot is swung in; on *Three* it is pulled upward, and on the count of *Four* it is brought back to the position of starting. This is performed twenty-five times night and morning.

Exercise No. 6.

This is a resistive exercise. The subject sits on a table and the second person sits on a chair. The former forcibly swings his foot inward and upward, and holds it in this position with all his power. The second person attempts to swing the foot outward and downward. This effort on the part of the second person is resisted by the subject. This exercise is carried out from fifteen to twenty-five times with each foot twice daily. At no time should the second person use as much power as the first. Between each two of these exercises the subject relaxes his foot.

Transverse or Metatarsal Arch Exercises

The following exercises have been found helpful for cases of weakness of the transverse arch:

Door Stop Exercise.

Obtain two old fashioned door stops at a hardware store. Remove the rubber tips with a pair of nippers. Screw these door stops into a board, about 14 inches long, 8 inches wide, and 2 inches thick. The door stops are to be about 6 or 8 inches apart. The board is placed on the floor, and the subject sits on a chair in front of it. Each foot is placed on a door stop with the pressure *just behind* the metatarsal bones.

On *One,* the toes are forcibly curled down, and on *Two* they are slowly allowed to relax. This is carried out every night and morning, going through the exercises until the subject has counted 200.

Marble Exercise.

Obtain several sized marbles, place them on a rug, sit on a chair and with the bare toes pick them up.

Pencil Exercise.

Place a round pencil on a hard floor and by means of the bare toes curled downward push and pull the pencil around the floor. Use short, quick movements.

Exercise for Shortened Heel Tendons

For shortened heel tendons an exercise of great value is the following:

Standing about 2 feet from a wall, place the palms against the wall, and allow the back and hips to sag in, at all times keeping the heels on the ground. This should be done about twenty-five times twice daily, and the distance from the wall should be increased gradually as the heel tendons stretch and will permit.

Corns, bunions, callouses, ingrown toe nails and a variety of other troubles may bring grief to the person who fails to observe the principles of foot hygiene.

Corns are of two varieties: the so-called hard corns, which occur on external surfaces, and the soft corns, which occur where two skin surfaces come together, where there is contact, moisture and warmth. They are usually found between the fourth and fifth toes and are quite resistive to treatment.

Callouses are due to inconstant pressure or irritation. Constant pressure produces an ulcer or destruction of tissue, while inconstant pressure produces thickening of tissues. They are common under the ball of the foot especially back of the third and the fourth toes. In this region they are due to depression of the heads of the metatarsal bones that help to make up the transverse arch. The individual feels as though he is walking on marbles, that the bones are down on the ground or have no padding. This results in an irritation of the periosteum covering the bones and occasionally in bursitis (a bursa is a sac containing lubricating fluid).

When the bursa of the big toe joint is inflamed it is called bunion and corresponds to housemaid's knee. Hallux valgus is the term applied to the outward deviation of the big toe. When a bunion occurs in the region of the fifth toe it has been called a "bunionette." Other conditions that may cause trouble in the region of the big toe joint are rigid big toe joint, rheumatic or gouty joint, and sesamoiditis or inflammation of the two small bones under the joint.

Hammer toes are deformities that may be either inherited or acquired; often they are the site of a corn. Overgrowing and undergrowing toes may be trained to grow in normal position by simple adhesive strapping. Occasionally a toe is so long that part of it should be amputated; this also is true of deformed little toes.

Painful heels may be due to bony spurs on the bottom, sides or back or to bursitis or chilblains in this region. Very often in the two latter cases it is necessary to remove the counter of the shoe, although frequently elevation of the heel in the shoe will afford relief.

Both tenosynovitis, inflammation of a tendon sheath, and arthritis, inflammation of a joint,

should be treated by a physician. So also should circulatory disturbances of the feet. These are frequently materially benefited by continuous elevation of the feet and dry warm air.

Plantar warts, which sometimes occur on the sole of the foot, are often due to irritation from nails, tacks or irregularities in the shoe, or to infection. Treatment for this type of wart may be x-ray, radium, or pressure relieving felt pads, the latter used in connection with strong acids applied to the wart to separate the healthy from the non-healthy tissue. The healthy tissue should be protected by a surrounding ring of vaseline.

Abrasions of the skin should be sterilized with a toothpick-cotton applicator dipped in tincture of iodin or 2 per cent. mercurochrome solution and protected by a small dressing of sterile gauze held in place by adhesive. Blisters of the heel or other regions should be treated in a similar manner. If large, they should be punctured by a sterile instrument and their fluid contents expressed.

Cracked or fissured toes should be treated with an application of compound tincture of benzoin and sterile dressing. If there is a tendency for the adjacent toes to pull apart, thereby increasing the fissure, the two toes may be strapped together with adhesive.

Care of Feet at Different Ages

The prophylactic treatment of ingrown toe nails is very important. The most important factors are well fitting stockings, round toed shoes, and proper trimming of toe nails, which means cutting them squarely across. The only exception to this is the ballet dancer's or toe dancer's nails, which must be cut at the corners. The treatment for the prevention of ingrown toe nails is (1) care in selecting the size of the stocking; (2) proper shoe fitting, and (3) packing tiny wads of cotton in under the edges of the nails.

Those who visit chiropodists should insist upon sterilization of all instruments that come in contact with their feet, and the utmost cleanliness of his hands.

For infections of the foot, as a temporary measure until a physician can direct the treatment, the use of hot saturated Epsom salt solution applied continuously in the form of fomentations, with considerable elevation of the foot, will be of value.

The feet of persons of different ages and conditions need special attention.

Thelma Moorhouse

The infant's foot, if there is no deformity present, requires merely bathing and the application of a dusting powder. If there is a club foot, parents should not wait until the child is a year old but should have treatment started immediately, even the first day of life.

It is important that the baby's stockings and shoes fit properly. Fat babies should not be encouraged to stand too early for fear of causing bow legs or knock knees. Stiff ankle shoes, i. e., reinforced with moulded leather, are of value in some cases of weak feet. Many parents with a laudable desire to keep white stockings clean have them washed frequently and although the stockings are dried over "forms," they often shrink and are a source of foot compression.

In adolescence, the foot is growing very rapidly and, as it is usually long and narrow, requires special attention in fitting shoes.

Exercises, massage and contrast baths are important in the care of the adult foot. The use of the fluroscope, which is fairly common at present, is of great value in obtaining proper fitting shoes. The most important measurement is from the tip of the heel to the middle of the big toe joint.

The pregnant woman must at all times be properly supported because during this period there is a tendency to a marked relaxation of the supporting structures; this is due first to the altered metabolism, and second to the increased weight her feet are required to carry. She must not go around the house barefooted or in bedroom slippers. Her feet should be exercised and massaged twice daily.

A common complaint among the aged is poor circulation of blood in the lower extremities. If those past middle life will spend an hour each morning and afternoon with their feet elevated on a chair or stool, they will be aided.

Persons recovering from an infectious disease, such as tonsillitis, influenza or scarlet fever, are apt to go about the house in bedroom slippers. This is an extremely bad practice for at this time the supporting structures of the foot are relaxed owing to the toxemia of the infection.

Standing causes more strain on the arches of the feet than walking because there is no relief from weight-bearing in standing.

Many persons can walk miles without tiring, but suffer considerably if compelled to stand in a street car or elevated coach for thirty minutes.

Hygiene for the Smoker

JAMES J. WARING

IN THE United States the consumption of tobacco has risen from 1.8 pounds per capita in the years immediately following the Civil War to 6.31 pounds in 1920; the production of cigarets has risen from three and a half billions in 1905 to seventy-five billions in 1924; excluding the expenditures for smoking accessories and the cost of incidental fire loss, our annual tobacco bill is now a little short of $2,000,000,000.

The idea that smoking may impair nutrition is not new; for years this has been more or less popular knowledge. Who has not at least one fat friend struggling vainly by furious smoking to ward off obesity? Many smokers whom I have carefully cross-examined in the last few years have given me good evidence that smoking unfavorably influences their weight. This I have verified on the scales a sufficient number of times to be certain that smoking in the adult is often a potent cause of malnutrition.

Here, for instance, is an athletic young colleague whose weight in the past two years has four times increased eight to ten pounds in the immediately succeeding two months after quitting smoking and four times has slipped back about the same amount after resuming smoking. A patient with a well arrested case of tuberculosis of the lungs has four times gained 10 to 15 pounds in weight on quitting cigarets and lost as much on taking them up again.

Smoking Can Kill the Appetite

Of a dozen cases that I have checked accurately one half being well men and one half consumptives, every one has shown a gain in weight of from 6 to 25 pounds in the next two months after stopping smoking, and two consumptives have gained over 25 pounds in the next four months. Without exception the general condition of every one correspondingly improved; they all had better appetites and freely admitted that they felt like different persons.

Why does the smoker lose weight? Chiefly because tobacco depresses the appetite. In the novice smoking produces nausea and vomiting; in the inveterate smoker, because of his acquired tolerance, it produces only distaste for food. The difference is one of degree and the fundamental cause is the same—the effect of nicotin and the other poisonous products of the combustion of tobacco on the nervous system. Since the smoker eats less it follows that he loses weight.

Why does smoking kill the appetite? Without entering upon too technical an explanation, it seems that the sensation of hunger varies more or less closely in intensity with the presence of certain contractions of the stomach which have accordingly been given the name of "hunger contractions." Nausea is accompanied by absence of hunger contractions and hunger sensations.

Carlson considers this restlessness of the hungry animal the proper biologic response to the stimulus of hunger, the final expression of which is the effort to forage. The cry of the hungry infant is due partly to the discomfort of similar hunger contractions. It is possible that the restlessness of the smoker may be of like origin, and the solace of the smoke therefore directly referable to the inhibition of these hunger contractions of the stomach.

In this connection, it is significant that the hungry animal is usually a restless animal, and that during the time of the stomach hunger contractions the tone or sensitiveness of the whole nervous system is definitely increased.

If this is true, the taking of food or the chewing of indifferent substances like paraffin, both of which quiet the contractions, may give considerable relief to the craving for tobacco. Unconscious application of these physiologic principles was made years ago by a Virginia missionary friend. Consulted by one of his parishoners for assistance in getting rid of the

If You Must Smoke— Here Are Nine Rules:

1. Do not smoke until past the age of 21 years.
2. Have a health examination periodically.
3. Use cigarets; not more than five daily.
4. Use dry tobacco and smoke slowly.
5. Do not inhale and blow smoke through the nose.
6. Smoke outdoors and never indoors.
7. Always use a cigaret holder or cigar holder.
8. Smoke only immediately after meals.
9. At least once a year stop smoking for a month or more.

tobacco habit, this clergyman cut a small bundle of clean cedar splinters and gave them to his parishoner with the injunction to chew on one whenever he felt the desire to smoke. This simple little remedy was found extraordinarily efficacious in this instance, and the usefulness of the application of the physiologic principle involved is further evidenced by the relief for the craving for tobacco often secured by chewing gum.

Additional reason for the loss of appetite from smoking may be found in the recent report of the New York state commission on ventilation. This commission found that stale air noticeably diminishes the appetite. For several weeks a number of young men and women lunched daily in an observation room under standard optimum conditions of temperature, humidity and air movement; a measured amount of fresh air was supplied on certain days, and other days none. It was found in four series of tests that more food was consumed on "fresh air" days than on "stale air" days. The increased quantity of food eaten on "fresh air" days, expressed in percentage of calories, averaged 8.35 for the series. With a daily allowance of 3,000 calories this would mean on the "stale air" days a deficit for the day of 260 calories, the equivalent of slightly less than one pint of milk. The excess bread and butter actually eaten on the "fresh air" days averaged 5.57 per cent. Since the air in the average room where smoking is being done becomes stale very quickly, we have here another explanation for the diminished appetite of the smoker.

Loss of weight may be due also to that form of chronic indigestion characterized by sour eructations from which the smoker frequently suffers. The inveterate smoker inevitably and unconsciously swallows a considerable amount of saliva containing not only some of the poisonous products of the combustion of tobacco, but also an alkaline infusion of the leaf itself. The symptom of sour stomach, directly attributable to the irritating effect of these poisons and often necessitating restrictions in diet, may lead eventually to loss in weight.

Then how may the average healthy man enjoy his tobacco without serious injury to himself and without making himself obnoxious to others?

How the Average Man May Smoke

In the first place, smoking is not equally harmful to everybody. Some persons are peculiarly susceptible to tobacco smoke because of constitutional idiosyncrasy; others may be more susceptible because of impaired health, as from a chronic infectious disease like tuberculosis or from chronic blood disease like anemia, while still others, the fortunate, vigorous, sturdy fellows, use enormous quantities of tobacco without apparent harm.

One thing is certain—the average man in poor health from no matter what cause, unless he leaves tobacco alone, is not doing all he might to expedite his recovery.

Even the normal man has his limitations; without a protest from nature, he cannot indulge beyond a certain point in work or in play or in food, tobacco and liquor. A moderate amount of smoking under proper conditions will probably not hurt a healthy man, but danger lies in the fact that the evil effects of habitual overindulgence in tobacco come on so slowly and insidiously that their origin is rarely or tardily recognized by the sufferer himself or his doctor.

In the following paragraphs I will try to explain what I mean by a "moderate amount of smoking under proper conditions."

1. *Do Not Smoke Until You Are Past the Age of 21 Years.*—It is common knowledge that most poisons have a more severe effect upon the young than upon the mature animal organism; it is equally well known that the bad effects of tobacco smoking are more quickly and markedly manifest in the undeveloped adolescent than in the mature adult. Not to smoke until past the age of 21 years or until graduation from college carries one safely past adolescence, the age of greatest susceptibility.

2. *Consult a Competent Physician at Least Once a Year for a Complete Physical Examination.*—If you must smoke bear in mind that you are daily subjecting your tissues, particularly those of the heart and arteries, to the frequent assaults of a recognized poison; that medical science has adequately proved that definite harm not infrequently results.

3. *If You Must Smoke, Use Cigarets, Not More Than Ten Daily, Preferably Only Five.*—The relative harmlessness of the cigaret is due to its perfect combustion and the consequent greater destruction of nicotin. On the other hand cigarets are dangerous for several reasons: they are cheap, convenient and apparently not forbidden in society anywhere or at any time, but the chief curse of the cigaret lies in the fact that inhalation is not easily avoidable and, as will be shown later, inhalation greatly increases the poisonous action of tobacco smoke.

In spite of these objections, the cigaret under the conditions stated is probably the safest smoke. The pipe smoker and the cigar smoker rarely if ever inhale. Contrary to popular belief, cigarets are not doped and the paper is not specifically in and of itself harmful.

4. *Use Only Dry Tobacco.*—Since nicotin occurs in tobacco in the form of salts of certain organic acids, which are broken down in the heat of combustion, more or less of the liberated nicotin being completely destroyed, it will be readily understood that the dryer the tobacco the more perfect the combustion, and the more perfect the combustion the less nicotin.

Tobacco should, therefore, be kept dry and cigaret or cigar should burn cleanly and evenly. The old smoker will tell you when his cigar burns unevenly it has a poor flavor and his neighbor will tell you it has a "villainous odor."

5. *Do Not Inhale or Blow Smoke Through the Nose.*—The habit of inhalation and the trick of blowing smoke through the nose are bad for two reasons: (1) They increase greatly the poisonous action of tobacco by favoring absorption; (2) they bring all the irritating constituents of tobacco smoke in full strength into immediate contact with the delicate mucous membrane of the respiratory passages. Chronic nasopharyngitis or catarrh, chronic inflammation of the throat and a mild chronic bronchitis with a frequent, annoying, dry, hacking cough are common complaints of the smoker and readily curable by simply quitting tobacco.

6. *Smoke Outdoors and Never Indoors.*—This rule has many advantages. In the first place since few of us are in the open air all day long, it automatically limits the daily ration of tobacco and, in the second place, it helps to keep one out of the hot, stale, stagnant, humid atmosphere of the average smoking room. The evil effects of poor ventilation are due to high temperature (the optimum is 65 to 68 F.), to staleness (fresh air should be renewed at proper intervals), to stagnation (the air of a well ventilated room should be kept in motion), and, finally, to excessive humidity.

With no more than one person smoking, the air in a room will rapidly become vitiated. In addition, the amount of absorption of poisonous products must necessarily be greater when the air breathed between puffs at pipe, cigar or cigaret, instead of being fresh and pure, is already heavily charged with smoke. Smoking outdoors permits perfect ventilation of the lungs with fresh air in between cigarets if not between puffs, and the dangers of rebreathing are avoided.

7. *Always Use a Cigar Holder or a Cigaret Holder.*—A variable amount of the poisonous constituents of tobacco smoke are dissolved in the saliva in the mouth; more or less of this saliva is unconsciously swallowed. The paper or mouth piece of the cigaret in some measure protects the mouth from contact with the tobacco, but the cigar end is always somewhat macerated, and the mouth consequently more or less constantly filled with an infusion of tobacco leaf. Unavoidably a certain amount of "juice" is drawn into the mouth of the smoker from his pipe.

8. *Smoke Only Immediately After Meals.*—Since it has been shown that smoking impairs the appetite, smoking should be done after meals and not before. The animal organism is well known to be more susceptible to poisons when empty than when well-fed.

Since smoking often depresses mental efficiency, it would be wise to postpone the first smoke until after the evening meal; in other words, get your work done first.

9. *At Least Once a Year Stop Smoking for a Month or More.*—Apply the principle of the therapeutic test. If cure results from application of the logical or the specific remedy for a certain malady, it is presumptive evidence that this particular malady was the cause of the disability. For example, if quinin cures a fever of doubtful origin, it being well known that quinin is a specific or certain cure for malaria, it is suggested that malaria was the cause of the fever. Again, if the removal of a certain article of food from the regular diet is followed by prompt and unmistakable amelioration of a digestive disorder, it is strong evidence that this article of food was the offending substance.

Now this principle of the therapeutic test may be applied to smoking. The inveterate smoker will find it wise and relatively easy when he feels unaccountably somewhat below par, or when convalescent from surgical operation or infectious disease, to suspend all tobacco for a period of one or more months. During this interval he should note carefully whether the appetite improves, whether weight is gained, whether mental and physical efficiency increases. If marked improvement occurs along all these lines, it is a fair deduction that tobacco is having a bad effect and that it should be omitted entirely, or at least decreased in amount and the methods of smoking radically changed along the lines suggested in this article.

When they will not quit at any other time of year or for any other reason many men, from religious scruples, quit smoking during Lent. Since the desire for tobacco is not infrequently lost after an operation or following a serious illness, "swearing off" smoking is most easily and naturally done on these occasions. The wise man heeds these gentle admonitions of Mother Nature. The folly of adding further poison to the system when it is already contending with or not yet recovered from the effects of disease should be obvious. I am certain that the convalescent will recuperate much more rapidly if he shuns tobacco until completely returned to normal. *The man who has chronic tuberculosis or any other chronic disease should not smoke.*

In conclusion, "swearing off" tobacco for a few months every year is a good thing not only because it trains the moral fiber and interrupts the process of habit fixation, but because it gives the cells of the body a chance to recuperate. Provided the opportunity is periodically afforded for thorough elimination of accumulated poisons, the tissues of the body will often successfully resist the harmful influence of poisons generated within the body or taken in from without.

Happiness Is How Your Heart Is

SOPHIE BOUCHER

WHEN Jennie Newton was twelve years old she was sick in a hospital for several weeks with a severe attack of rheumatism. After the fever left her, the doctors found her heart was so badly damaged that her physical activities had to be limited.

Shortly after leaving the hospital, the clinic arranged to send Jennie away for convalescent care. A representative of the convalescent home who called at the clinic on the appointed day to take Jennie to the country was somewhat amazed to see Mrs. Newton wheeling an overloaded baby carriage up the street.

"But where is Jennie?" said the worker.

"This is Jennie," answered the mother, "I take such good care of her that I have never allowed her to walk since she came home from the hospital."

After some argument on the part of the worker and many tears on the part of Mrs. Newton, Jennie was lifted to her feet and Mrs. Newton was urged to return home with the baby carriage.

Jennie Begins to Learn a Trade

Within two weeks after reaching the country Jennie had regained some strength in her legs and was able to lead a fairly normal life. She remained at the home for two years and, after being graduated from the elementary school there, returned to New York to enter high school. But within two months she began to show unmistakable signs of fatigue and strain and after consultation with a specialist at the clinic was transferred to a special trade class, then recently started by the New York Heart Association. She decided to take the course in millinery, but showed no interest at all in her work and seemed really unable to carry on. It took her three minutes to eat her luncheon, and the other fifty-seven minutes of the lunch hour were spent with her head upon her desk.

One day a note came from Jennie's sister telling us that Jennie would have to drop out because it was too hard for her to keep up with the work. Thereupon all the agencies interested in the case cooperated actively, with argument and persuasion, and before a week had passed Jennie had returned to school.

Today, instead of being a thorough invalid, she is one of the advanced pupils in the millinery class, is the president of the student government association, and vice president of the school bank. She has developed a sense of responsibility, and by her attendance (she has missed only two days from school in six months), her punctuality and her attitude toward her work and her teachers, she has shown a most remarkable development of character. She is on the way to many years of useful, happy, independent life.

There are many other Jennies who have heart disease and can be helped by special vocational work as much as Jennie was. In 1921 the committee on vocational guidance of the New York Heart Association began to realize that children who had attended special trade

Roof garden gymnastics are in progress. The exercise is not strenuous, for the girls are sufferers from heart disease.

classes in the elementary schools, in which they had been kept on one floor, carefully supervised by a nurse, given selected diet, and sent periodically to heart clinics, later had to attend ordinary secondary schools regardless of their heart condition. A certain percentage of those children were improved enough to go on in the secondary schools, but those who could not fell into two distinct groups:

1. Those who broke down under the strain of the regular school routine and were placed on the suspense register.

2. Those who, because they disliked the course of study selected, or because of economic reasons at home, had made application for working papers.

This is the way the suspense register and the working paper law in New York work out:

When a child is unable, for reasons of ill health, to attend school daily, he must file with the bureau of attendance a certificate signed by a practicing physician of the city, giving a diagnosis of his condition and recommending his absence from school for a definite or even an indefinite period of time; such a child is put on the suspense register and need not attend school again until the expiration of the stated period of time. The list of such children from all over the city is kept on file at the bureau of attendance.

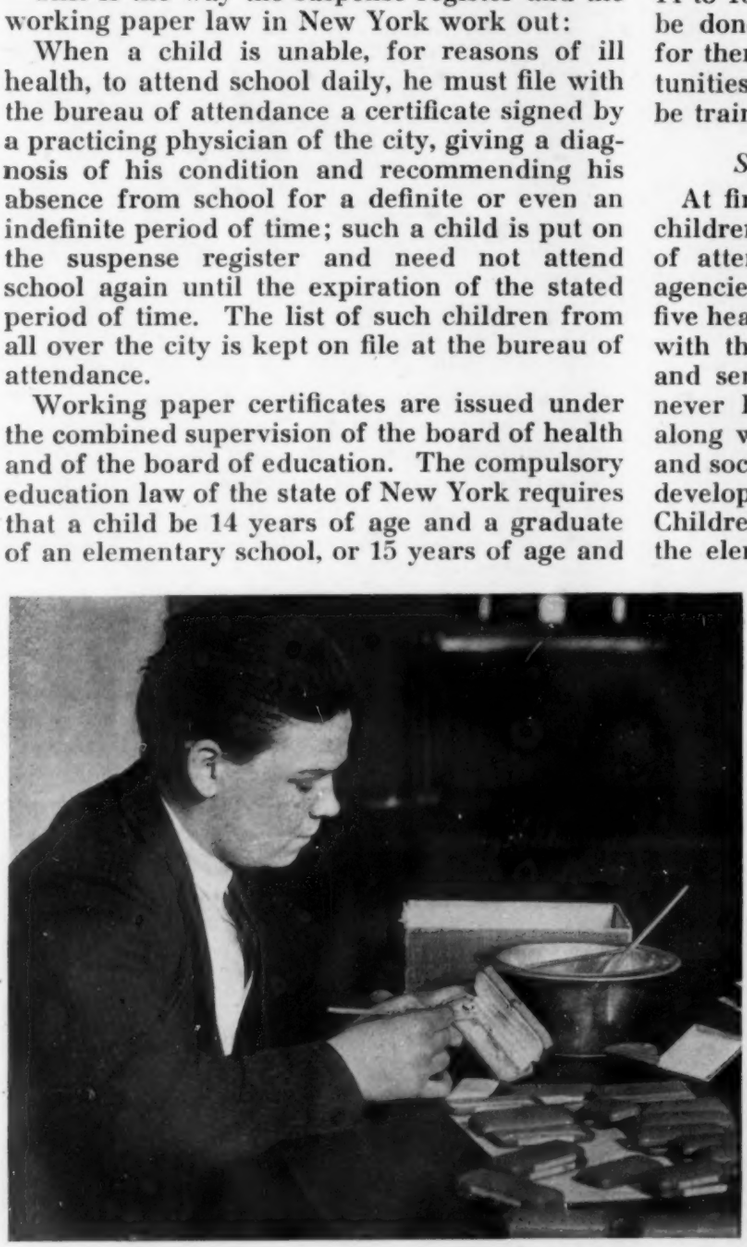
Working paper certificates are issued under the combined supervision of the board of health and of the board of education. The compulsory education law of the state of New York requires that a child be 14 years of age and a graduate of an elementary school, or 15 years of age and have attained the 7A grade in elementary school, before he may apply to the board of health for a working certificate. A working certificate is a permit to go to work and is required of all boys and girls between 14 and 16 years of age.

Even though a child measures up to the required age and grade, he is frequently refused a certificate because of one or more physical defects. There are between 5,000 and 10,000 who fall into this group every year. Neglected teeth, bad eyesight or infected tonsils may prevent a child from obtaining a certificate but, when the defect is corrected, he may reapply and receive his permit.

Organic heart disease is a defect that cannot be corrected, and it is important to reach this 14 to 16 year group of children to see what can be done to secure proper medical supervision for them, and to put them in touch with opportunities for further education so that they can be trained before going into industry.

Special Trade Classes Established

At first the heart association merely put the children from the lists furnished by the board of attendance in touch with already existing agencies for training and placement. The forty-five heart clinics cooperated to the fullest extent with the association in their new undertaking and sent many children who might otherwise never have been reached to the department; along with them was sent a complete physical and social history. The work of the department developed gradually for about fourteen months. Children were placed in the high schools and the elementary schools, with recommendations that they be excused from physical exercise, that they have the use of the elevator in the building, and that regardless of zoning, they be sent to the annex nearest their homes.



If a person with heart disease has talent with water colors or has a knack for drafting, he is lucky. This boy is happy making jewelry cases.

The Institute for Crippled and Disabled Men gave splendid cooperation, and took boys in the classes in jewelry making, typewriter repair and light printing when vacancies occurred. The Manhattan Trade School for Girls took in a number of girls who had special ability in the needle trades. The rehabilitation bureau assisted materially in training both girls and boys in short trade and commercial courses, when there was not enough money for four years of high school or a trade school.

Finally an appeal was made to the board of education to establish special classes in which such children could be trained in suitable trades under medical supervision. The board voted the money for the salaries of three teachers and supplies necessary for

teaching seventy children for one year, and the Children's Aid Society offered the first floor of its fine, well lighted building at 136 East 127th Street. On January 1, 1923, the trade classes for children with heart disease, offering courses in millinery, dressmaking and novelty work opened as an annex to the Manhattan Trade School, with seven girls and three teachers.

Children with functional heart disorders are not admitted to the class, because they may carry on in the regular training schools without detriment to themselves; those whose physical activity must be restricted are excluded because they will probably not be able to carry on in industry. The examining physician is assisted by a nurse, who refers the children of the class to heart clinics for periods of reexamination, makes appointments for treatment of eyes, teeth and tonsils and gives occasional talks on personal hygiene, general health and diet. Now that the school is well past the experimental stage, it has been taken over by the Public Education Association.

The curriculum of the school is the same as that of the Manhattan Trade School; one half of the six hour day is given over to academic work, English, civics, geography, and arithmetic including estimating yardage and costs; the other three hours daily are spent in practical work in the trade selected. The preliminary two months' training is identical in all the trades, each girl being required to make a needle case, a bag, a pair of bloomers and a smock.

During the fall of 1923 the girls' school had developed so hopefully that the committee returned to the board of education with results and figures of the ten months' experiment, and was successful in obtaining sufficient funds to open similar classes for boys. The Children's Aid Society offered a second floor of the building at 127th Street and on February 1, 1924, the Murray Hill Vocational School for Boys opened an annex for boys with heart disease, with a teacher in charge and two trade teachers, offering courses in mechanical and architectural drafting, and in jewelry-case making, a trade hitherto untaught in the public school system of New York and one especially adapted to children suffering from heart disease. The curriculum, as in the girls' school, is divided into three hours for academic work and three hours for work at the trade selected. A hot luncheon is served daily, at a cost of 10 cents, and consists of soup or cocoa, a vegetable, bread and butter and dessert.

It is difficult to put down on paper the many opportunities offered at these schools, and the many benefits derived from them. Enough cannot be said for the teachers in charge of these classes, and for the specialized trade teacher working with them. To begin with, every child in the school is capable from the standpoint of health of taking his place in the industry for which he is being trained, and while the teachers, the doctor and the nurse are working constantly to build up a reserve resistance against future illness, the emphasis is laid more particularly upon the industrial and academic aspects of the school.

Jennie is learning the millinery trade at a special school for children with heart disease. She will not be a burden on her family.

There are many cases of interest. One, for instance, was a boy in his third term at Morris high school struggling to keep up with his class in spite of a heart damaged by rheumatic fever, and failing in one or two subjects each term. He was tired and discouraged and was only marking time until his sixteenth birthday when the law would no longer keep him from getting a job. He was urged to transfer to the two year course at the trade class, and there he is doing well in drafting.

The education of an 11 year old girl was so intermittent because of ill health that when patched together it would barely cover a period of three years. This girl, when she entered the school, had never heard of a fraction, but her intelligence quotient lay somewhere between 80 and 90, so that her teachers knew that it was lack of opportunity rather than dulness that retarded her. Individual attention to the girl soon remedied this retardation, and in two weeks she was computing fractions in her head.

Although the work is still too young to show great results, an important step has certainly been taken to prove that children with heart disease are not out of the running because of their handicap, but may become useful citizens of the community if they are properly trained in suitable work, and eventually placed in positions for which they are physically and mentally fit.

The Worst Health Fad or Fraud I Ever Fell For

PRIZE LETTER CONTEST

The Stretching Machine

FIRST PRIZE, $25

I WAS only five feet tall and very much disappointed that I was not so tall as my sisters. Even my younger sister was taller than I, and at nineteen years of age I sadly gave up all hope of growing any taller.

Imagine my joy and hope when one day I read in a magazine an advertisement something like this: "You can add from one to five inches to your height by a simple, easy method. Others have done it, why not you?"

I lost no time in writing for full information to the address given. I received a quantity of advertising from the Cartilage Company, Rochester, N. Y. There were many testimonials from persons who had increased their height. There were also some ludicrous views of very short persons with very tall ones. The applicant was to fill out a blank, giving height, age, weight and other details.

However, my heart sank when I read the price of the magic apparatus, which was $10 in advance. I had no money of my own and I knew there was no use in asking my father for that amount because he would not have been in sympathy with its expenditure, and as there were so few ways in which a farmer's daughter could earn money, I had to give up the idea for a time.

Shortly after this I went to work in Buffalo, which was the nearest city. With the very first $10 I saved I bought the cartilage stretching machine. When I unpacked the box, I was a little disappointed at first in the simplicity of my purchase. A piece of rope with some leather straps attached to the end, two separate leather loops, and an iron ring attached to a hook, constituted my $10 outfit. But others had added to their stature, why not I?

So I carefully read the instructions.

The apparatus was to be erected in a doorway, preferably the closet doorway leading from one's bedroom. The hook with the iron ring attached was to be fastened at the top of the doorway in the center. The loops, which were for the feet, were to be fastened on the floor in a proper position beneath the hook. The free end of the rope was to be pulled through the ring at the top of the doorway, and the harness at the other end was to be fastened around the body just under the arms. This harness was to be adjusted to the body, the feet were to be held on the floor by the loops and the body was to be stretched by then pulling on the rope. This position was to be held while one counted twelve. After a few moment's relaxation the stretching was to be repeated. These exercises were to be continued for fifteen minutes both morning and night. There was another harness which fitted around the head and this was to be substituted for the first one after three months. The number to count was raised, and this with the new apparatus made the exercise more strenuous. The treatment was said to show some result after six months' continuation.

I was very much disappointed that I had not increased in height at the end of that time. I religiously kept up the exercise for a year and a half, and that I was doing strenuous stretching was evidenced by the fact that the screws which held down the foot loops were loosening. At the end of that time I again measured myself, but as I had not added a fraction of an inch to my stature, I became thoroughly discouraged and disgusted, and discontinued the torture.

M. L. W.,
Buffalo, N. Y.

The Vaco Reducing Cup

SECOND PRIZE, $10

I HAD taken lemon juice, thyroid tablets, tried the tomato and hard-boiled egg diet, the lamb chop and pineapple diet, rolled, bathed in salts, steamed, rubber-corseted myself, eaten Basy bread, and sworn off of butter. But when I read about the Vaco Reducing Cup, I thought I had reached the end of my search for a slim figure.

"An amazing new discovery. It removes the fat from the very place you want it removed" —read the advertisement. "Only use the Vaco Reducing Cup three minutes night and morning." What a joy! Gone the exertion of setting-up exercises. With visions of a figure like a ballet dancer and a half-hour extra sleep every morning, I sent for this "amazing new scientific wonder" that would bring true my paramount wish.

Slightly puzzled, but not dismayed, I set about to use the rubber cup. According to directions, one had but to press one's thumb firmly on the top of the cup and the Vaco Reducing Cup would do the rest. Although I nearly dislocated

my thumb, I managed to get through the "three minutes" the first night. Irritated and sore, I literally crawled into bed. A restless night was the chief result. Undaunted, I accomplished the "three minutes" the next morning (but with much gritting of teeth).

The Vaco Reducing Cup worked; it worked great wonders on me—wonders in the shape of large red welts—but my scales noted no reduction in weight.

The device, plus the direction card, cost me about $3. Being frugal, I could not throw it away. A wooden handle wired to the rubber cup made an efficient force pump for flushing the drain pipes of the bowls and tubs; the directions I made into a permanent exhibit. And whenever I find myself seeking another easy road to slenderness, I produce that exhibit—the last and the worst fad I ever fell for.

A. B.,
Chicago, Ill.

Finger Surgery

THIRD PRIZE, $5

WHEN first I noticed anything wrong with my hearing, I came to Chicago and consulted a specialist, who after a few weeks' treatment told me there was nothing more he could do. Unwilling to accept this as final, I went to a second specialist, who confirmed this opinion and advised lip-reading.

I could not give up hope. A friend sent me some pamphlets written by a "doctor" in an eastern state, detailing some wonderful results he had secured by what he styled "finger surgery." I wrote this man, received a reply, also some further literature, with the result that I went to him for consultation. I was examined, told that he could give me substantial and permanent improvement, that an operation was necessary, followed by postoperative treatments. He said his charge for the operation would be $200 (I had already paid $25 for examination); that the postoperative treatments would be $10 each, that usually patients received two treatments a week, and generally about six months was required to effect a cure. I "fell" for the whole thing, and having no means of my own, a relative, wanting me to feel that everything would be done that could be, agreed to advance the necessary funds.

This man succeeded in stringing me along—although at times I became discouraged—by such positive and reassuring statements as: "Our technical tests show a noticeable improvement." "You will never need lip reading." "You are headed for victory and a substantial and permanent improvement in your hearing." Repeatedly he told me a wonderful change was taking place in my eustachian tubes and ear drums. His nurse (they apparently understood each other perfectly) would exhibit her charts and emphatically substantiate any statements he made. Even when I decided to abandon the treatments he insisted there had been a great improvement.

I paid him in all something like $1,500, to say nothing of other expenses incident to my stay in the East, and the endless, tedious and nerve-racking hours spent in going to his office, waiting my turn, etc.

How could I have been so imposed upon? I was desperately anxious to save my hearing, his office was imposing and filled with a fine appearing class of men and women, and I saw copies of the Journal of American Association of Osteopaths on the tables containing articles written by him, saw his name on their convention programs, and supposed he was at least honest and sincere.

I finally left the East and on arriving in Chicago consulted the aurist who had examined me previously, and I leave to the reader's imagination the agony and heartbreak, when told, after the time and money I had spent, that there was no improvement, but on the contrary the disease had progressed.

I am told that this Brooklyn man is still a member of the American Association of Osteopaths "in good standing," although several of the more prominent members and officers of this association have had a full account of my experience.

W. H. B.,
Chicago, Ill.

The Thermocap

HONORABLE MENTION

"NEW hair grown in 30 days or no money accepted." That was the advertisement that struck me. After reading through this wonderful article on the new way to grow hair, I decided to clip the coupon and send for the booklet explaining this new treatment.

You may imagine how one troubled with thin, falling hair would pore over this book that would bring him a good crop of hair. But although I was convinced and the price was moderate—only $10—I did not immediately send for it. After receiving this first article, every week or so I received further information and literature concerning this wondrous treatment that was benefiting so many already. My decision to send for it was hastened by the fact that Alois Merke had sent a personal letter and reduced the price, so I ordered it quickly.

When I received the treatment, I started in earnestly to apply the tonic and new invention called the thermocap that is supposed to be of the same value as violet-ray but which, in reality, is a common globe of light blue glass. I was somewhat surprised after using the treatment for two weeks to find that my hair had not improved. At the end of a month's use my hair not only fell out just as much as before but even more, and it is needless to say that no new hair came in.

In spite of all the letters I sent to this firm I have not received a reply, and after using the thermocap for over two months I threw it away, never again to be fooled in believing that new hair can be grown.

M. S.,
Trenton, New Jersey.

Cancer Cure

HONORABLE MENTION

NOT until I fell for more than one health fad or fraud did I realize that I was living in an age of science and also of ignorance concerning the noblest of all professions, that of the medical practitioner.

When I look upon the health market, I find the skilful, ethical physician who devotes his life unselfishly to the amelioration of human misery classified with the quacks, fads and frauds by the lack of laws which would differentiate and separate the fit from the unfit and the honest from the humbugs. Toleration of this chaos has been costly to many a suffering mortal; I am one of them.

For three years I suffered and searched for help. After a dentist had relieved me of the burden of all of my teeth, I felt somewhat better, but still after the newness of my artificial teeth had worn off, I was tormented by a sharp pain in my left lower jaw.

In my agony I fell for patent medicine and blistered my skin, irritated my nerves and lessened my resistance. I soon dropped this unscientific way of employing medical aid, but fell into the other extreme of looking for relief by the highly advertised drugless cults. Several healers, among them a man who traces the trail of the lonesome spine, failed to deal the death blow to my suffering.

Instead of getting better, I grew worse. The only results I was able to record were: a lighter pocketbook, a more severely aching jaw and head, and the addition of a constantly draining sore on the left side of my face. I grew desperate, melancholy and spent my evenings at home brooding over my misfortune. Mr. Coué's formula, of "getting better and better," sounded like a beautiful lie and Mother Eddy's mysticism of denying the constant pain had no effect on me.

When able, I took to reading, and there in one of the leading Sunday papers, I met my Waterloo. I fell for a very generous offer: "Physical examination, including blood tests and x-ray examination for One Dollar."

"There," I shouted, "is at least one man with a heart," but I did not realize until it was too late that his rather enlarged heart was all pocketbook. After I had found his office and received his panacea for all sick mortals and had deposited my dollar, I was examined by means of a fluoroscope and pronounced a cancer case. But not a hopeless one, I was told. For the modest sum of only $200, I would be cured by the diagnostic wizard.

I was, of course, willing to be relieved of both the pain and the money and received my "radium treatment" by means of a small high frequency apparatus. The sore healed after a few treatments and I was discharged as a cured cancer case.

Although a dull pain remained, I was happy to have the cancer removed and for about one month I had my domicile in heaven, sending other victims to the doctor, until by the sudden reappearance of the sore I dropped from my dizzy heights of glee into the bottomless pit of despair.

This was my worst health fad or fraud I fell for, because soon afterward a friend of mine forced me into the office of an honest-to-goodness physician, who took an x-ray picture of my head and pointed out that an embedded molar in my left lower jaw with a large area of ulceration was causing my pain and worries. I then became fully convinced that the tooth beneath my gums was the trouble-maker and not a cancer. I had the cause removed and am happy and well, and also cured in more than one way.

R. H. J.,
Amsterdam, N. Y.

Health Camps for Children

ETHEL M. HENDRIKSEN

OUTDOOR life has found a popular expression in summer camps. The main idea of these camps is to provide recreation for those who are in robust health. But there is a special kind of camp for sick or undernourished children which is known as a health camp.

Health camps take into account the physical handicaps of children and adapt their programs of activities accordingly. Their object is to transform pale, sickly and unhappy girls and boys into rosy-cheeked, healthy and radiant children.

Summer camps are fine places to make healthy boys and girls healthier, but the sick or undernourished child needs to go to special health camps. This is Camp Kawajiwin, Minn.

Originating with tuberculosis agencies, the health camp within recent years has gripped the imaginations of men's clubs and lodges. The Rotarians, Lions, Elks and other groups are prominent in their support of camps for children whose homes are unable to pay the full cost of the care given. Practically every city now has one or more of these camps. They are operated usually only in summer, although some cities have found it a good investment in child health to maintain them the year around.

Any new movement that grows rapidly is apt to lack standards. It takes time to determine certain best ways to results, so it is not surprising that health camps are operated on such a variety of plans. This article attempts to point out the need of standards and from wide observation to call attention to some of the practices in health camp management which seem most commendable and to others which experience shows should be avoided.

There is an immediate need for a health camp manual and for a training course for health camp workers. Until such a manual is available many excellent ideas may be secured from the manual on organized camping recently issued by the Playground and Recreation Association of America, edited by L. H. Wier, field secretary of that association. Courses on general camp management and practice, which offer much for the health camp worker, are to be had at Boston University and at Teachers College, Columbia University.

"My boy came back from camp a wreck," complained one father who had sent his undernourished son to one of the regulation vacation camps.

The child who offers a distinct health problem needs the health camp rather than the vacation camp. He should not be expected to compete in strenuous sports with boys who are his superiors physically. It is recognized that "overnight" hikes, swimming contests and exhausting games are not sports in which the malnourished child can partake. The health camp recognizes the handicaps of its charges and adjusts its program accordingly.

At first only children exposed to tuberculosis were cared for in health camps. More recently, since public attention has been focused upon the malnourished child, camps have included crippled children and all children under par. Tuberculosis and health agencies usually are in charge of these camps, even when they are supported by other organizations.

It was the Emerson nutrition class plan which gave the health camp its greatest impetus. By adopting this program health camps were enabled to cause children to gain in weight and improve in health far more rapidly than before. In fact, this program now in use in the majority of camps is the first step toward standardization of the work.

The outstanding changes in program which the nutrition class plan offered were these:

1. Thorough physical examination of all children several months prior to admission to the camp, with the correction of all remediable defects.
2. Attention to rest periods; two daily, instead of one as before.
3. Use of the calorie method of measuring food so that each child is insured a proper amount of food daily.
4. Cooperation of the home to keep the child contented while at the camp.
5. Weekly weighing and measuring of children and frequent medical attention, especially for those who do not show the expected improvement.

When this program was instituted in the health camp in Rochester, N. Y., in 1920, the average individual gain increased 2.5 pounds a week over that of the previous summer in which the usual vacation camp program was used.

Under this program a thorough physical examination is made, including urinalysis and a Wassermann test. Unless the child shows evidence of a successful vaccination he is revaccinated. If the Schick test for diphtheria is positive he is given toxin-antitoxin. A few days before entering camp a special examination for parasites is made of the skin and hair.

A uniform age group makes camp work easier. Also, it is more successful to handle boys and girls separately in different camps or to take them to camp in separate squads.

Today one can hardly call any site inaccessible, with the almost universal good roads and bus lines. But a health camp location should be a real retreat from civilization. A sunny hillside with a wood at the back and a stream of water in the valley below, just right for wading, is ideal. Such a site is achieved by the Lions Club camp of New Rochelle, N. Y., in the foothills of the Berkshires.

Unless one can be very sure of good weather, permanent buildings are best, even for the summer health camp. But, a few tents should be included to give an atmosphere of romance. Tents are difficult to ventilate and have been abandoned as camps have become permanent. Sleeping shacks often make the mistake of providing too little window space, probably owing to the cost. They should be built to allow all the advantages of an open-air sleeping porch. Always where children are concerned, there should be maximum provision for fresh air and sunlight. This is the first essential of a health camp.

Often the clean fresh boards of a new camp will be preferable to painted surfaces, but in the case of remodeling a house for a camp, light colored paint is to be sought for woodwork and tables rather than floor coverings or table linen. Simplicity and sanitation should govern camp decorations, but the furnishings should be cheerful and attractive.

Costs of Camps Vary

Health camps are supported in a variety of ways. Usually everybody is eager to help. Christmas seal sales, community chests, business clubs and lodges are among the most prominent sources of support.

A budget for a summer health camp for units of ten children may run as low as $500. A successful little camp in Orange County, New York was operated for this amount. Or it may go as high as $10,000 for the summer, an amount expended by the Lions Club and Tuberculosis Committee jointly in White Plains, N. Y., in caring for forty children.

Costs may be partly met by charging parents who can afford it for the children's board. The White Plains camp realized about $400 in this way. The maximum amount charged was $7 per week, less than the full cost of maintenance per capita.

Camp costs are difficult to compare because of varying standards. Some of the leading camps pay their trained nurse directors $150 to $160 a month with maintenance. One camp paid its director $200 a month and maintenance. It probably may be said fairly that any salary which a community could manage would not be too much to pay the right person. The work is exceedingly difficult and very confining.

Helps on camp accounting, buying and menus will be found in the manual on organized camping, previously referred to.

Some High Spots in Sanitation

In every camp it will be found necessary to instruct food handlers in the modern idea of personal cleanliness. The average cook still tastes her viands with the spoon with which she stirs, is careless about washing her hands thoroughly with warm water and soap after using the toilet, coughs and sneezes without covering her mouth and nose with a clean paper handkerchief. The correction of these habits is of far greater importance than a spotless uniform, as desirable as this may be.

Dishes when left to children to do are not always washed in a sanitary way. This should be a point for early consideration. If the camp can afford it, electric dishwasher equipment

Blossom time in Tennessee is a happy time for children at the Cheerfield Farm near Memphis. Cheerfield Farm is a health camp, the most popular feature of which is a pony and cart.

is an excellent feature. The dishes then are handled only to set away.

Flies and vermin of all kinds must be prevented. One camp, a model in every other way, had neglected to screen its toilets. The fly line from those toilets to the kitchen probably was the cause of the nausea and bowel disturbance of which that camp complained.

The source of the milk supply should be carefully investigated. Milk from tuberculin tested cows only should be used, except in case of pasteurization, and even then it is well to make doubly sure that the tubercle bacillus, the most long-lived of all the various organisms found in milk and the greatest enemy of childhood, is not present. It would be worth while to have the health department or a reliable bacteriologist test a sample of the milk at frequent intervals.

Unless a city water supply which is known to be safe is used, the drinking water should be analyzed at the opening of the camp and at least once during the season. Directions for treating a water supply to make it safe for use are to be found in the manual on organized camping. The chapter on camp sanitation would be valuable to read in connection with the organization of health camps.

Outdoor facilities for washing are very desirable. An outdoor drinking fountain should be provided, making sure that the bubbler is diagonal and cannot be covered with the mouth.

There should be an arrangement for the daily disposal of garbage, preferably by an incinerator or by burying in well-covered pits at least fifty feet from camp.

Usually a camp committee is formed and this committee is responsible to the organization under which the camp is financed and operated. A director is employed and is given full charge of the camp administration, including the employment of the staff. She makes monthly reports to the committee.

Experience indicates that there should be one paid worker and one volunteer for every unit of ten children; this in addition to the director. So that a camp of twenty children would have a staff of a director, two paid assistants and two volunteers. In addition there would be a cook and her assistant. All employees should have a physical examination just before the camp opens.

The most satisfactory results usually are obtained with a group of not more than twenty children. Of course, it follows that in dealing with physically handicapped children, the smaller the unit the greater the individual attention. And yet there is a certain stimulation in the larger group which appeals especially to the city child, who has been used to many companions.

Diet of Great Importance

With physically handicapped and malnourished children the diet and food habits require especial attention. One of the workers should be a trained nurse experienced in children's dietaries. Milk is the principal article of diet and each child should get at least one quart of it daily.

There is a belief that orange juice served in the middle of the morning may be better than milk at that time. This is practiced in the health camp of the Los Angeles Tuberculosis Association. Other necessary foods are cooked brown cereals, fresh vegetables and fruits.

An effort should be made to insure happiness, but not excitement, before and after meals and at the meal times. Opinions vary as to whether the workers should eat with the children.

The food for each meal should be measured to make sure that every child eats 2,500 to 3,500 calories every day. Sweets between meals must

An outdoor swimming pool—what fun for the health camp children!

be avoided. Some camps give bread spread with jelly for mid-afternoon lunches. This practice is not the best. If candy is allowed it should be only after meals.

Menus should be most carefully supervised. It is perplexing to note the errors that occur in dietary in the best camps. Drop into any camp unexpectedly and you may have a shock. Such surprises as "fried bread served with butter and syrup" will greet you. This will constitute the entire meal except for milk. Or the berries will tempt the cook to surprise the children with a rich shortcake. Or hot biscuits will be the order for tea.

All too frequently you will hear that lettuce could not be secured that day or that there were no fresh vegetables procurable so the cook used lima beans of last year's crop. Of course, we know that this sort of diet is common for children in many homes. Until we can be sure that every child is getting wholesome, digestible food in the right quantities we cannot know definitely just what part food plays in nutrition. The health camps should be especially interested in promoting this experiment. A set of health camp menus for every day in the year is very much needed.

Medical Supervision Necessary

Children in the health camp group should show progress from week to week. With this in view, weekly weighing is recommended. Also there must be medical supervision. Perhaps a weekly visit by a physician will be sufficient, but a daily inspection should be made by a nurse. The experience of one camp in which a child became very ill before her condition was noticed has led that director, a public health nurse of much experience, to take a daily temperature of every child in the camp. This is done about the middle of the afternoon, shortly after the rest period.

The benefits of sunshine are coming to be more and more appreciated. From the camps where the Rollier treatment is given, it is learned that children, like plants, thrive in sunshine. The sun's rays have a way of transmitting some of their radiant energy to the human bodies exposed to them. Care must be taken that this exposure is gradual, a few hours daily until the children can do well in the sunshine all day except in the hottest midday hours. Children in a health camp should wear light, thin clothing to allow the sun's rays to get to the skin.

In giving instruction in health habits, some directors find the Modern Health Crusade score card of the National Tuberculosis Association a help. One is especially adapted for nutrition class children. This is recognized as the most efficient method of teaching health habits and one which offers a direct means of checking up the effectiveness of the instruction given.

The habit of a daily movement of the bowels at a regular time should be thoroughly established during the camp period and especially reported on to the mother when the child leaves camp. It may be found necessary to keep a daily bowel record for each child until it is fairly certain the habit is established. Most camps lack sufficient toilet facilities. One toilet seat for each unit of ten children seems inadequate, and yet this is what most camps provide, except in cases in which both girls and boys are cared for in the camp. This necessitates separate toilets.

Shower baths are more satisfactory than tubs. A warm, cleansing shower at night and a cool shower in the morning is the ideal.

Space usually will not allow cots to be farther than five feet apart. They should not be closer than two and one-half feet. Every precaution should be taken to see that children are comfortable at night. Workers should sleep on the porch with them. Bedtime stories should be happy and rhythmical. Children who report restlessness and bad dreams should have special attention given their food habits and other habits which might be responsible for this condition.

To carry out one of the objects of the camp—the teaching of health habits—it is necessary to observe a schedule in hours of sleep, time of meals and lunches, time for toilet, time for rest periods. The rest of the day should be more or less free, with just enough directed play to keep the camp running smoothly. Nature study, handicraft and similar ideas may be utilized. One camp director regards a skilled arts and crafts teacher essential to the success of her camp.

Corporal Punishment Taboo

Most camps require a daily task of each child, varying it with the days or weeks, and children usually are taught to make their own beds and help with the general order of the camp. Through these simple tasks the love of service for others and the respect for orderliness come.

Too much drilling on virtues, as such, is not advisable. As some one has aptly said "Character is caught, not taught." It is highly essential that this fact be kept clearly in mind in selecting workers for the health camp.

The matter of discipline seems almost a gift which some possess by force of their personalities and others never acquire. To the former type one may say "enforce all rules pleasantly but firmly" and by some necromancy they will be carried out. Others cannot rule without "laying hands" on a child. The most successfully disciplined camps follow a plan of self-government, and corporal punishment is taboo.

Many adults fail to realize how keenly the sense of justice is developed in children. If rules are carefully explained, one can usually secure intelligent cooperation. An alert leader can anticipate mischief and forestall it by keeping children otherwise occupied. It is very necessary that camp workers understand child nature. One of the best known methods is to recall one's own childhood.

To be shocked and pained when very little children manifest an interest in matters of sex is to admit a certain callowness. Rather should the worker have anticipated this problem and worked out a way to deal with it, before the whole camp took on a guilty air which translated itself into pounds lost and progress temporarily retarded.

Camp Visitors Discouraged

To undertake a definite piece of health work with a child without the cooperation of the home may improve the health of the child for the present, but the interest of the home is necessary to secure permanent results. Before the child is accepted for camp, the director should visit the home and explain all that is contemplated. An acquaintance with the parents will help the director to deal more sympathetically with the child. Confidence in the director will prevent the parents from writing letters and making visits to the child, which will incite homesickness.

Some camps plan to have a regular visiting day. Often this is Sunday, so that the fathers as well as the mothers may come. Sometimes a nutrition class is held so that the parents in a group may measure the progress of their child with other children. This has excellent features but, in general, the Sunday nutrition class is considered a bad plan. The large crowd, the excitement, the gifts brought to the children, and the overindulgence of some parents, all conspire to defeat the purpose of the camp. After the opening day, when all parents and other interested persons may be invited, visiting should be discouraged. Visitors are a problem with practically every camp. It should be prominently announced at the beginning of the camp work that, except for the members of the camp committee, visitors will be received only by appointment.

Church attendance sometimes has been a problem in health camps. Usually it may be better to invite ministers in the community to visit the camp and talk to the children rather than to plan for church attendance unless the church is quite near. Practically every camp provides a daily devotional service in connection with a flag raising or bedtime "quiet hour" so that attention is given to the cultivation of the spirit of reverence. One director in a small camp hears the prayers of every child individually. These few confidential moments often act as an inspiration to more acceptable group conduct.

Publicity Opportunities of Camp Work

Cordial cooperation on the part of the public in camp work depends on the bridge of understanding built by careful and efficient publicity. It is desirable that the community be made to feel a pride in the camp and to share in the credit for its work. Community pride is the spirit to foster rather than the pride of the par-

It rarely gets cold enough for skating in Shelby County, Tenn., but the Cheerfield Farm children have a roller skating rink in winter when the swimming pool is floored over.

ticular group or organization that made the camp possible.

To determine that the enterprise shall have a social significance for the city or the county of which it is a part is to focus the public mind on the whole problem of child health. Some minds will reason through the problem. Why is a children's health camp needed? Why have schools not educated young people for parenthood? Why must the city of X have bad housing and overcrowded conditions for some of its children?

The program of the health camp, featured consistently in the local newspapers, will be read widely by parents in the community. Some of the parents will adopt it for their children. So that the health of many more children than those in the camp will be benefited as a result of the endeavor. The best organized camps look beyond the service they render to individual children and become a child health demonstration center.

The successful camp will not regard its work completed when it sends the child back home. If the camp has succeeded in capturing the child's own interest in his health, it should see that the home has a full report of the child's progress and is thus convinced of the value of the camp program as a routine for the child thereafter. At least one follow-up visit should be made to the home to try to impress upon parents the value of health to the child and some knowledge of how it is maintained.

As many of the children will have come to the camp through school nurses and physicians, a report of the child's progress at camp should be sent to these friends.

At the close of its summer camp, one tuberculosis organization invited camp children, accompanied by their parents, to its offices every Saturday morning to be weighed. This was not wholly successful, although a few came throughout the fall. This same organization gave a health picnic for camp children the following June, to see how they had maintained their weights and general appearance over the winter.

One of the oldest and most successful health camps is Hillcrest of Syracuse. This camp was first operated for the summer months only but is now a year around camp. It has a most efficient director who has continued on at the camp from year to year. The Rotary Club gave notable service in its establishment.

Camp Happy at Philadelphia is well known through the motion picture film it has circulated; this camp has become a year around camp also.

The Sunnybanks Preventorium at Grand Rapids, Mich., an outgrowth of a summer camp, cares for twenty children the year around but increases the number to forty in the summer when an open-air sleeping pavilion can be used. This delightful vacation home for children is one of the most satisfactory in the country in its architecture and setting. It is a little white cottage with a simple doorway set upon a hillside under apple trees. Charm is added to the approach by a decorative gateway and one is apt to see the pet Collie dog asleep on the steps and a pet lamb and a few chickens at home among the children who play quietly about.

After a visit to this delightful place one is not surprised to learn that Sunnybanks Preventorium holds the record, so far as is known, for highest camp gains. This camp uses the nutrition class method.

Arden Shore camp for boys in Chicago was the first to use the nutrition program at the suggestion of the Elizabeth McCormick Memorial Fund. Some excellent results have been achieved.

Cheerfield Farm, a camp founded by the Shelby County Tuberculosis Association, Memphis, Tenn., has made children happy in some unusual ways. Since the weather seldom brings ice and snow, the swimming pool is floored over and used as an outdoor roller skating rink. Among their pets is a charming pony and pony cart. The Memphis camp points the way to a permanent future for all camps. It was taken over last year by the tuberculosis board of the city and county to be maintained by public taxation.

Story hour around the camp fire is an important event in camp life.

Giving Children True Health Ideals

EDITH LOCHRIDGE REID

PROBABLY we have all been amused by the story of the boy who was told to wash his ears before taking his music lesson, but when reproved because his right one was still unwashed, replied that he only did the one that would be next to the teacher. This yarn may or may not be an incident based on actuality, but it is no more an exaggeration than many of the ideas and ideals handed out to children regarding health and cleanliness.

"You mustn't eat any more candy, for if you do you'll get sick and have to stay in bed," is one of the stock threats which occasionally cause a child to desist candy eating, but which do not go far toward establishing wholesome dreams of good health in the young imagination. This form of correction is negative suggestion and is often weak and misleading.

"Your teeth are white and lovely like the milk you drink every day," a wise mother tells her baby girl just old enough to use her toothbrush. Not many words in that remark, yet the mother has encouraged her child to drink milk and brush her teeth without threat or unpleasant suggestion.

Negative Suggestion Is Bad

"Wash your hands good now," I have heard a mother say to her small son, "because we're going to have company for supper"; and I have often heard this same woman tell the boy to wash his hands so he wouldn't get the baby's white dress dirty or so that he wouldn't leave soiled marks on the white woodwork in the kitchen.

Logically that boy would figure out that if there wasn't any company, if baby didn't have a clean dress on or if he kept his dirty hands off the kitchen woodwork there was really no particular reason for washing them.

Should mothers and those in authority teach cleanliness as a standard in itself and not in its negative relation to other things and people, the results would be infinitely improved. If children learn in the very dawn of their intelligence that it is healthful to be clean and that cleanliness is as much a part of decent living as virtue and honesty and religion, then they will practice this habit at least fairly diligently.

Respectable parents do not admonish a child not to steal lest some one see him doing it, but rather tell him that he must be honest because that is right. By the same token then, they should have them wash their hands to get the dirt and germs off and to prevent disease, and not because company is coming to tea.

Two little girls were sitting along the curb putting on their roller skates. One of them laid her half-eaten apple down on the cement of the street—a moment only—until she could strap her skate, but the other girl, who evidently was taught ideals rather than sham, protested, "Oh, don't Marjorie!" At this exclamation Marjorie started in dismay, and replied, "Why? Is my mother looking?"

In this case Marjorie was growing up with the familiar idea that committing an offense against health was not in the carelessness of the act but in being apprehended. Marjorie had not been made responsible for health conduct. She comes from what is known as a splendid home. But she observes health rules simply because it displeases her mother to have her do otherwise and, as has been shown when outside her mother's direct supervision, she had no basic judgment for being particular in her actions.

Health to children should mean something more than an accident or streak of good luck. The health ideal should be an objective to be attained worthily and with prideful effort, just as an athletic trophy is coveted and won. We should teach them to thrill with the joy of wholesome strong bodies, which they have achieved through their own choice of common-sense conduct.

Annabel Starts an Epidemic

"I don't feel well—may I go home?" Annabel asked her teacher not half an hour after the morning session of school opened. At this request the teacher noticed the flushed face and general symptoms of illness and asked: "Why did you come to school, Annabel, if you knew you felt sick?" To which the child replied, "I didn't want to spoil our attendance record."

In that short period, however, Annabel had loaned her pencil to a girl across the aisle, had hung her cloak over that of another child in the locker and had passed her arithmetic paper to the boy one seat forward for correction. The result was that she passed along contagion which resulted in a dangerous epidemic in that school. The disease proved fatal to one child and caused grief and expense and suffering that was all the

more pitiful because it was unnecessary. With a proper health ideal established, Annabel would no more have gone to school feeling ill as she did than she would have taken matches and set fire to the desk and books of her associates. Of course, promptness and regularity are necessary points in school attendance, but in some way a personal code of health and sanitation should be achieved that would always take precedence of all other obligations in the mind of the parents, the teacher and the child.

Any health crusade in which reward of merit marks are won through "health chores" has not reached its fullest accomplishment unless the children have learned respect and loyalty to the health issue itself rather than to the winning of a medal alone. Health contests are a wonderful opportunity for parents and teachers to instruct in health habits, but these should be only an opening wedge to more helpful and interesting things—a means to an end and not the end itself.

Two Mothers and a School Health Program

"Since you've gone to bed early, played outdoors and eaten proper food, you have pink roses in your cheeks," a mother said to her small daughter.

"Yes and I've gained six pounds," added the little girl, with the glow of real pride in her expression.

In this instance, the program of good habits had its impetus in a school health contest in which these various requirements of sleep and diet were involved, and the little girl's daily record showed that she had faithfully done all the ten things necessary to get "good marks." But this wise mother knew how to make the most of home cooperation by stressing the true ideal on which the contest was based. In this way, even though the prize should be awarded and the competition ended, the health ideal remained as a permanent structure long after the scaffolding was removed.

"Mother, where's something to tie up my finger, I scratched it on a wire?" asked Jack as he came bounding into the house where his mother was busy.

"Get something out of the ragbag behind the closet door," replied mother.

"Gee, that won't do. Teacher says we should keep a roll of gauze in a sanitary package, for cuts and things—" pleaded Jack, but his mother broke in impatiently:

"I've tied up your fingers many times before that teacher ever began fussing over you."

This is the type of mother who lets the children wipe their noses on their coat sleeve and who takes them to the movies when they're coughing their heads off with colds or whooping cough. She is almost hopeless as a convert to any sort of health argument, but if Jack is only fortunate enough to get teachers with patience and perseverance for a year or two longer he'll be loyal enough to public health ethics to sell his best marble and buy a roll of gauze to protect his injured finger.

One day in late winter I was cutting through the park when I saw a small boy wading around the edge of a lagoon in which pieces of ice were still floating. He was trying in vain to reach his cap, which repeatedly eluded his grasp.

When I saw how he was shivering, I exclaimed in dismay over his condition: "You're half frozen, better run right home."

But between his chattering teeth he protested: "My cap blew in here and I can't go till I get it. Losing my cap is the worst thing my mother won't let me do."

Which can be interpreted to mean that in his family a dollar cap is one unit for measuring conduct. He had evidently been so impressed by the fact that his cap must not be lost that he would have retrieved it at almost any cost, probably taking chances as quickly if it had blown off in front of an auto or street car. This boy's mother may not have meant to have him wade in ice water to save his possessions, but the fact remains that she had not stressed care of the body emphatically enough that this thought was supreme in this little personal crisis.

If we would build health principles into the daily lives of our children from the earliest years of training, many problems that now exist would be eliminated. A great deal of the fretting over trifles would be obviated from the very fact that the nerves are normal and under control in healthy bodies. Much of the friction over school report cards would disappear with a course of going to bed on time, eating properly and wearing sensible and adequate clothes.

Family Conversation Can Be an Aid

Yet to make children see that good health is not merely incidental but is vital to success and happiness, is not easy for parents or teachers, but by faithful effort it can be achieved.

Much stress should be laid on community activities, new swimming pools, drinking fountains, parks, camps and similar features that have such an important place in human life. These topics can be discussed in family conversation and the children encouraged to express their ideas about location, beauty, sanitation and other phases. In this way bathing and exercise will take an interesting place in the child's life because he soon understands that all this washing of hands and brushing and manicuring at home is not a selfish idea of his mother's but that it is linked to a bigger and broader health scheme in which every one helps with resulting comfort and enjoyment.

Only when a child definitely learns to obey the laws of health from personal choice and responsibility has he caught the vision of true health ideals.

Human Nature in the Hospital

As Seen by a Nurse

MERLE PERRY

"I'LL NEVER forget how frightened I was the day on which they brought me here," said Mrs. Stevens, as I bandaged her hand for the last time before discharging her. "You certainly looked it," I laughed. "You were on the verge of hysterics, your mother was crying and your husband looked as if he had the weight of the world on his shoulders. I thought yours must surely be a very serious case, and you were only coming in to have an abscess opened. Next time you'll not mind it, will you?"

"Oh, I hope I'll never have to come back," she exclaimed, "but if I'm ever very sick I shall want to come. I have had such very good care and since my pain stopped I've really had a good time. Why I laughed myself sick last night over that funny little Irish nurse."

"You're like many of our patients," I told her, as I helped her into her coat. "They have heard dreadful stories about the careless nurses who give the wrong medicines and mix up the babies, and the heartless doctors who experiment on the helpless patients in the interest of science. But most of them go away with a friendly spot in their hearts for the hospital."

Mrs. Stevens' patience, thoughtfulness and appreciation had endeared her to all of us and, glad as I was to see her on the road to recovery, I was sincerely sorry to say goodbye.

Bad Reports Spread and Grow

After she had gone, I began to reflect on some of these incidents which are probably the foundations for the tales that get abroad about the hospital and upon some of the amusing and tender little glimpses we get of human nature.

A hospital is a human organization and its members make mistakes just as they do in other organizations, but when a mistake may cost a life one is instinctively more careful than if the results were computed in dollars and cents. An evil report, however, always grows and it spreads faster than a good one. For instance:

Mrs. Michaels rang for a glass of water. The nurse on the section was busy with another patient and could not leave for seven minutes. As she left Mrs. Michael's room to get the water, the telephone rang. Another seven minutes was consumed giving the information required and before the nurse was back with the drink seventeen or eighteen minutes had elapsed, which seemed to a thirsty patient with nothing to do but wait for a drink half an hour at least. That evening she told her husband that she must have waited a good half hour for a glass of water. We know human nature well enough to know that with a repetition or two the half hour naturally and innocently enough passed into an hour.

Another incident will illustrate how easily misconceptions may occur.

It was time for the ten o'clock feeding and I was carrying Baby O'Malley to his mother. I turned on only the dim light to avoid disturbing the other patients and gave the baby to his mother with a whispered word or two.

Five minutes later a frantic ringing sent me hurrying back to the ward where I found Mrs. Marowsky indignantly holding at arm's length the O'Malley baby and hysterically repeating: "The babies is mixed, the babies is mixed."

The beds had been moved earlier in the evening and it had not been reported. Mrs. Marowsky now occupied Mrs. O'Malley's former position and in the dim light I had given the baby to the right bed but the wrong mother. A tiny seed of doubt was instilled into the simple mind of

Mrs. Marowsky, who went home the next day dissatisfied and uncertain in spite of assurances and explanations whether the baby she had been loving for two weeks was really hers.

I frequently read of babies being interchanged in hospitals. This makes a good story but I do not see how with the care taken such a thing could be possible. A necklace, an armlet or marker of some sort bearing the mother's name is placed on the baby before it leaves the delivery room and is not removed until the child is discharged.

Common Complaints of Patients

There are probably more complaints about delayed service, food and noise than any other things. Nurses are seldom standing at leisure ready to respond the instant a signal rings. New patients will send a nurse on three successive errands which could have been taken care of in one trip, but the thoughtful ones quickly see that there are many demands upon a nurse's time and try to save her as much as possible.

Satsifactory tray service is a problem which every hospital is constantly trying to solve. No doubt a patient's jaded appetite and limited diet have much to do with his dissatisfaction.

As to noise, with the utility rooms of necessity located centrally in each division, with dozens of doctors, nurses and visitors constantly passing through the halls, it would be impossible to maintain the quiet of a home sickroom.

"I suppose there are many patients who try your temper," a patient once said to me.

I seldom feel impatient with my sick people because I realize that the source of their irritability and unreasonableness is in the disability which places them in the hospital, and all of us are inclined to be cross and irritable when we are sick. But there are times when I would like to pour out the vials of my wrath upon the patient's family and friends.

There is the mother and father who draw me confidingly aside and say: "Here's a nice box of candy; now you be good to my Rosie, won't you?"

This happens to me time and again, and I always have a moment of anger although I know that no offense is meant.

Another one that arouses my ire is the wife who before she has been in the husband's room five minutes has felt his hot water bottle to see if it is hot, his ice bag to see if it is cold and asked him if he has had his ten o'clock medicine.

However, we know that these things are only manifestations of the anxiety that is felt concerning the welfare of a dear one, and the desire to see that nothing affecting his comfort and welfare is left undone.

We see enacted enough little dramas of devotion to restore our faith—had we lost it—in the essential goodness of human nature. I like to tell in this connection the story of Miss Granger.

Martha and Katherine Granger had been left a small income by their widowed mother, sufficient to allow Katherine, who had decided music talent, to study at the conservatory, while Martha kept the flat and made a home.

Martha, never strong, contracted pneumonia one winter and was brought to our hospital. The weeks went by but Martha did not recover her strength and one day the doctor told Katherine that Martha had tuberculosis and that her only chance for recovery lay in her staying in the hospital at least three months longer.

Their small savings would not begin to tide them over this emergency. So Katherine sold the grand piano, gave up her music and got a job as saleswoman in a clothing store. But never a word did she tell her sister. She came every evening and told tender little fabrications of her progress at the conservatory.

After four months, when Martha was again at home, Katherine explained the absence of the piano by saying that she had moved it into the studio of a friend downtown and was teaching every afternoon.

I know that the sister eventually recovered but I never heard the conclusion of their story.

There is, of course, an occasional man who, believing that a nurse must of necessity have lost all sense of modesty and womanly fineness, proceeds to disregard the privacy of screens. But much more numerous are the poor deluded souls who spend a miserable twenty-four hours before they realize that a nurse is not lying in wait to snatch the last vestige of covering from them, and with heartless, sexless, scientific zest proceed to minister to a piece of machinery which happens to be flesh and blood. They soon reach the stage when the approach of a nurse with a pan of bath water does not fill them with helpless terror.

Children, Parents Permitting, Are Good

It is surprising what little trouble we have with children, if only they do not see too much of their parents. But of course it is impossible to convince a mother who has never been away from her baby for a night that the child would be better off without her right from the beginning. Naturally the child will be a bit homesick the first night, but he soon becomes contented and we are able to give him his medicine and treatment with no difficulty.

He soon learns to like the doctors and nurses as they become attached to him, and to learn that there is no use haggling with them over what is to be done.

We have the most trouble with children after visiting hours. They are discontented and peevish and the homesickness that was forgotten must be conquered again.

Many mothers will say within the child's hearing: "That dressing hurts her so; must it

be done so often?" Or, "Isn't there some other medicine he can take; that makes him so sick."

The little patient, quick to sense anything even slightly approaching criticism of his treatment, rebels the next time, thinking that mother's former omnipotence will somehow banish everything distasteful.

Some of the children's comments would be amusing if the pathetic circumstances which inspired them were forgotten.

One young boy, fretful and miserable, lay moaning and complaining vaguely of whatever came into his mind. Looking down the rows of beds, most of them showing a gray woolen blanket, and remembering no doubt his mother's gay pieced quilts at home, he exclaimed fretfully: "What a place, what a place, not a bed quilt in the house!"

Another little fellow full of pain and distress after an appendicitis operation said, when the nurse had cooled his hot little face and his hands with a cool moist cloth: "Now wash my pain."

Are Men or Women Better Patients?

We are often asked which are easier to care for, men or women. If there was but one patient it would probably make little difference, but given a choice of a ward of ten men and one of ten women, most nurses would choose the men's ward.

"Women are always so fussy," they would say. "But don't you think that women stand sickness and pain better than men?" is a question women frequently ask.

I think that in really big things there is not much difference between a man's and a woman's fortitude, but men do not seem to mind the little things that drive a woman—and her nurse—to distraction: wrinkles in the sheet, a pillow too hard or too soft, water too hot or too cold, a binder too tight or too loose, a door that squeaks. A woman would keep a nurse busy with such little things that men seldom notice. Not that I underestimate their importance, for I feel that anything which increases a patient's comfort and happiness is important.

There is one pet grievance common to both men and women—the fear of drafts. The temperature of a ward may be eighty degrees, the air oppressive with the odor from sick bodies, yet when a window is opened some are sure to feel a draft, even though they are well covered and the air is warm and refreshing to their senses. They are unable to live down the old tradition that a draft is dangerous. However, one does not need to look only in the hospitals or among the ignorant to find an almost superstitious fear of fresh air, especially night air.

We women, as the men are fond of telling us, regulate our lives by our instincts and emotions rather than by any process of reasoning, and in the stress of personal danger we are no exception to the rule. It is the woman, never the man, who says dramatically just as the ether mask is about to cover her face: "Now, doctor be careful, won't you; remember I have three little children at home." It is a good thing she reminds him, otherwise he might be careless and leave a pair of scissors lying in her abdomen, or thoughtlessly remove the liver instead of the appendix.

Making Diagnosis Difficult

It is very hard sometimes to get an intelligent description of symptoms from some patients. They find it difficult to translate their general misery into terms of specific information helpful to the doctor.

The following dialogue is characteristic:

DOCTOR: What seems to be the matter?
PATIENT *(with a "This is a clever answer" look):* That's just what I want you to tell me.
DOCTOR *(impassively):* What do you complain of?
PATIENT: Well, I'm just miserable all the time. I haven't had a well day since I left the country. My husband has been coaxing me to go to a doctor for weeks but I thought it was just nerves and said—.
DOCTOR *(patiently interrupting):* Have you any pain?
PATIENT: Oh, yes, I hurt all over.
DOCTOR: Is it very bad in your legs?
PATIENT: Well, my legs don't hurt me much.
DOCTOR: How about your arms?
PATIENT: My arms are all right.
DOCTOR: Where is your pain the worst?
PATIENT: In my stomach.
DOCTOR: How long have you had this pain in your stomach?
PATIENT: Oh, a long time.
DOCTOR *(resignedly):* Ten years?
PATIENT: Oh, no, I think it started last year. My doctor at home says it is nervous indigestion, but my husband says—.
DOCTOR: Yes! yes! Let me see your tongue.

In defense of patients like this let me admit that many doctors and nurses, overestimating the layman's knowledge of the human body and of common medical terms, express themselves to the patient in language only half intelligible.

There are a few stock remarks that we expect certain situations to call forth and we are seldom disappointed.

The first time we comb a woman's hair, if she is not too sick, she invariably exclaims: "My hair used to be so thick; there's nothing to it any more." And if the nurse comments upon its beauty or thickness she says: "Oh you should have seen it last year!"

Money could not buy from me my experience as a nurse. Patients lift for us as for no others the veil that hides the inner life and we see the naked soul at its best and at its time of extreme need. In helping to meet that need, I have found increasing satisfaction as the years pass by and I have been repaid for all the hard work and worry in the friends I have found during my thirteen years' service.

The Family Won't "Play Up"

AGNES MORRIS

I HAVE been in health work for many years and happen to know the main facts concerning transmission of communicable diseases. My job is to write and preach about personal cleanliness and the value of hygienic habits.

My family is thoroughly interested in the work I do, thoroughly sympathetic with all its details; its various members are quick to pass judgment on leaflets or lectures, but they pay little attention to anything they read or hear in reference to their own way of doing things.

Each one has his own supply of towels as well as separate container, or rack, for toothbrush and wash cloth, but instead of these articles being kept in place, there is frequently such a grand mixup in the bathroom that no one knows "whose is which." I publicly and privately condemn this unpardonable carelessness. The answer comes very promptly: "Why we haven't any of these terrible diseases; what are you fussing about?"

Sharing the Family Cold

Now and then when some one catches a bad cold or contracts something that is going around, a copper stationed at the sickroom door would not prevent visiting. Even the baby is carried from room to room so that his mother or his grandmother may chat with the invalid.

Upon warning that the baby may take influenza or the cold, there is the same positive assurance: "He won't take it." "Why won't he take it?" "Well, he hasn't." Does that prove anything?

The so-called patent medicine is another bone of contention. Labels and advertisements read so convincingly that they call forth an immediate and interested response. The attention of the family is called to the fact that the patent cure-all claims for itself impossible achievements. They are reminded that no one remedy can cure rheumatism, neuralgia, sciatica and a host of other unrelated maladies. But if one's joints ache with arthritis and the preparation of iron and quinin, phosphate, calcium and so on, speaks eloquently of cure if swallowed by the tablespoonful three times a day, then it would be "flying in the face of providence" if the $1.75 were not forthcoming for this particular bottle of stuff which will remove pain forevermore.

Now if this average family, with some one constantly on its trail to suggest, advise and even threaten, will not practice the rules of hygiene, what about many other families which have neither a working knowledge of causes of communicable disease, nor any one in the family to make war on habits which spread disease?

The psychology of this condition is clear. The average person has no strong conviction as to the simplest truths of medical science. Sickness is objective. If measles is prevalent every one knows it, but if an epidemic of measles is warded off, how it was done does not make an impression. It is impossible to say with certainty that a cold was contracted from a certain individual, but if one is chilled from a draft, or sits around wearing wet shoes and stockings, it is easy to say that the draft or the wet shoes caused the cold.

There is only one remedy for families which do not play up as they should, and this remedy lies in the teaching of health habits. This should be done in the home, of course, but if the home has no interest in this form of training, then the burden lies on the already overburdened teacher. She must train; training is better than teaching. It goes without saying that the training should be persistent in the kindergarten and primary grades. Personal cleanliness should be insisted on.

Teacher Must Step In

The teacher may say, "I am not a nurse," but if training the children in habits of hygiene makes one a nurse rather than a teacher, it is better to be the nurse for that child at that particular period of its life. The poor children who have nothing done for them at home to help them keep clean are the ones who need help the most.

It is not beneath the dignity of the teacher to do anything for the child that will help him get well or keep well, nor is it outside her province to take an interest in this kind of training and to work enthusiastically in the cause of health. The adult family may be quite impossible to train, but every child is a potential influence for hygienic betterment.

Remember These Men

HENRY COPLEY GREENE

IN BUSINESS, at least once a year we study our gains and losses; we take a count of stock. In talking of health, look back over fifty years and see what we have gained. Shall we keep our gains and increase them; or shall we throw gains and prospects together to the winds?

In the days of Pasteur, surgery with chloroform had begun its modern advance. Medicine, with some practical skill in the art of healing, had learned how to prevent one disease—smallpox. But physicians' eyes were still dim. They could not understand. The light in which we see nine tenths of our work for health today came with Pasteur. It was the mind of Pasteur in its brilliance which first revealed the origin of contagious disease, and it was in his brain that modern bacteriology began. It is from Pasteur and his insight that we must date our possibility of escape from such age-long curses as diphtheria and lockjaw.

Let us remember Pasteur, and thank him. Let us remember, too, those followers of Pasteur whose energy of thought and labor has given us life and health. Remember Lazear, whose courage met even death to prove the cause of yellow fever. He won for Cuba and our southern states freedom from that yearly horror. Remember, too, that explorer of today, Banting, whose brain and patience have brought us insulin, which is now saving hundreds of men and women from death by diabetes. Remember these men, remember their nameless but keen and toiling fellow workmen of science. And remember what they have given to man.

Mental healers tell us that by taking thought we may cure disease. By the thoughts of our minds, by the emotions of our hearts, we may enhance our bodily health. But health is not won, nor is disease conquered, by such immediate means. Our salvation comes through brain and labor; through insight, experiment and verification; through the method and patience of scientific thinking. In that sense disease is conquered and health is won by thought. It is won by the brains of Pasteur, Lazear, Banting. Yet strangely enough, it is through what some men call thinking that our health may be lost.

Through twisted thinking, through perverted propaganda, you and I may be snared. We may be led to refuse the means of immunity, such as vaccination, which the brain of man has won for us; to limit, restrict and throttle by law the very processes of thought and study on which our future salvation depends.

This suggestion may sound fantastic, yet the danger is real. It is so real that thinking men have been forced to come together and prepare defenses for your health and mine.

Who are these men? Let me name half a dozen: Charles W. Eliot, president emeritus of Harvard University; James Rowland Angell, president of Yale; the Hon. Charles Evans Hughes; the Rt. Rev. Alexander Mann, bishop of Pittsburgh; Owen Wister, author; and his Eminence, Cardinal Dougherty.

DO YOU know of the American Association for Medical Progress, which Mr. Henry Copley Greene mentions in this article?

It is composed of many eminent men who have leagued themselves together for the protection of your health and mine. They believe that the marvelous advance in the medical sciences which has saved the lives of thousands of human beings and animals and has prevented untold suffering should not be halted by misguided, unwise legislation.

They prefer to have a plump, sleek horse lose a small quantity of blood for antitoxin than to see little children die of diphtheria, for example.

The association, which maintains headquarters at 370 Seventh Ave., New York, has as its honorary president, Dr. Charles W. Eliot of Harvard and as acting president Thomas Barbour of the Agassiz Museum of Comparative Zoology.

Honorary vice presidents are: Dr. James Rowland Angell of Yale, the Hon. Charles Evans Hughes, Bishop Mann, Cardinal Dougherty, President Pendleton of Wellesley, Ernest Thompson Seton and Owen Wister. Not one of its officers is a physician.

Eminent men of such different types have leagued themselves together, because the forces of reaction have gone too far. These reactionary forces have attacked and are still attacking not merely vaccination, not merely surgical experimentation (with horses and with dogs), not merely the special studies which have brought to man immunity from diphtheria, and life instead of a lingering death from diabetes, but they now attack every possible experiment in which animals are used for scientific research. They now oppose and propose to stop "all experiments on living animals for purposes of scientific investigation, or for any purpose other than treatment of the animals themselves."

What does this mean in relation to diphtheria? Certain plump, sleek horses are now used to supply antitoxin. A single one of them in recent years has yielded antitoxin literally worth his weight in gold. He moves his skin in slight objection when he is curry-combed, not when the small quantities of blood for antitoxin are removed. Yet, if we accept the doctrines offered us, this easy going horse must be put to labor, and the children whose lives he is saving must be left to die.

This new method of thinking in relation to diabetes means that Banting would have been prevented from experimenting on dogs which he kept under ether so as to avoid all possibility of pain. It means that Banting would have abandoned his search, or would still be searching in vain, for insulin, which has saved and lengthened so many lives.

The conquest of smallpox, lockjaw, yellow fever; the winning fight against diphtheria and diabetes—these are but a few of our gifts from modern medicine, with its methods of patient thought, experiment and verification.

Remember those etherized dogs of Banting's. Remember Lazear, who gave his own life for many lives exposed to yellow fever. Remember the brilliant pioneers like Dr. Carrel. Remember these men and their backers, too, Cardinal Dougherty, Owen Wister, Bishop Mann, Mr. Hughes, President Angell, and President Emeritus Eliot. Do not let yourselves be misled. Follow the leadership of men such as these, and help guide both private and public opinion into the paths of truth—the truth which sets men free from the bonds of disease and needless death.

The Spleen—An Unsolved Mystery

E. P. LYON

Hail, wayward Queen!
Who rule the sex to fifty from fifteen;
Parent of vapors, and of female wit,
Who give the hysteric, or poetic fit,
On various tempers act by various ways,
Make some take physic, others scribble plays;
Who cause the proud their visits to delay,
And send the godly in a pet to pray.
—*Pope.*

POPE'S "wayward queen" who is the subject of these lines is the spleen. Because an organ so large needs an explanation for existence, some imaginative person once decided that the spleen must be the seat of human emotions.

That was interesting material for the poets and authors and they lost no time in taking up the idea, so that even today we "vent our spleen" in books and ordinary conversation. There is no scientific basis for the idea.

No one knows definitely what the uses of the spleen are. This much is known about it: The spleen is situated at the left of the stomach and is composed chiefly of lymphoid tissue. By lymphoid tissue is meant a cellular structure like the tonsils and the lymph glands of the neck and axilla—the glands that are often removed in cancer operations. Many investigators believe that lymphoid tissue has to do with the manufacture of white corpuscles.

The blood in the spleen is not confined in vessels with definite walls as in other organs, but fills large spaces among the spleen cells. This allows an intimate contact of blood cells and spleen cells, and permits cells formed in the spleen to be swept out into the blood current.

The spleen also contains a considerable quantity of smooth muscle and consequently changes in size as this muscle contracts or relaxes. Therefore the spleen behaves something like a heart and is supposed by its relaxations and contractions to assist the blood-flow through itself. The contractions occur about once a minute.

After a meal the spleen slowly increases in size and after about five hours begins to return to its previous volume. The increase is due to relaxation of the muscle and consequent engorgement with blood.

All these facts point to some function in connection with the formation of blood.

The spleen can be removed without causing death, and the animal or man shows for a time after this operation a deficiency of red blood corpuscles. Some people think the spleen is the "graveyard of red corpuscles," but the evidence is not conclusive.

The chemistry of the spleen is complicated and not well understood. So far as known it does not produce an internal secretion.

That Mysterious X-Ray

LEO M. DAVIDOFF

IN 1895 Wilhelm Konrad Roentgen, a German physicist, discovered a new kind of ray, which he called x-ray for want of a better name. This ray, unlike rays of sunlight, is invisible and is produced by leading an electric current through a certain type of vacuum tube.

He found that in a totally darkened room, if the tube in which the ray is produced is covered by black cardboard, a fluorescent screen as far as two yards away is made to shine by the ray which must, of course, penetrate the black cardboard to do so.

This naturally led him to further investigations, and he discovered that practically all material is penetrable by this ray, but in varying degrees. Thus, wood is somewhat less penetrable than cardboard, metal less than wood, and among metals some, like gold and lead, are far less penetrable than others, like aluminum.

In this way it is easy to see that if a piece of lead were placed on a piece of wood and the two together were intercepted between the source of the ray and the screen, there would appear on the screen a shadow of the lead and a much lighter shadow of the wood, in the same way as a tree and a layer of mosquito netting that intercept the light rays from the sun will cast shadows of different densities on an opposite wall. By substituting a photographic film for the fluorescent screen and by placing a steel key between the leaves of a thick book for the wood and lead, he found that he could obtain a photograph of the shadow cast upon the plate by the relatively impenetrable key as compared to the penetrable paper and cardboard of which the book was made.

Applying X-Ray to Medical Needs

Now, if he held his hand in the path of the rays a picture was obtained showing the skeleton of the hand, since the bone is relatively less penetrable than the softer tissues of the hand. This was the beginning of the application of x-ray to medical needs. For it may readily be seen that if a picture of the bones can be made, then the presence of a fracture or other abnormality of the bones can be shown in such a picture.

After Roentgen's discovery left the experimental laboratory and began to be applied in practice, many improvements were made, but for a long time practically nothing except disturbances of the skeleton could be detected by the x-ray. Later, Prof. Walter B. Cannon of Harvard showed that hollow organs like the stomach and intestines could be photographed with x-ray by placing into them chemical compounds that are impenetrable to the rays and at the same time harmless to the body. Following the same logic, various compounds were discovered suitable for bringing the kidneys into view, and recently a substance was discovered which, if injected into the blood, will collect in the gallbladder in sufficient quantity after six to twelve hours to make this organ visible as a shadow on an x-ray picture.

While all these advances were taking place it was also discovered that this peculiar penetrating ray causes the destruction or burning of the cells out of which living tissues are made, if these cells are exposed too long to its influence. Many an early investigator added sad proof to this property of the rays by inadvertently exposing his own body to serious burns.

Use in Treating Tumors

Later this power was also subdued to human needs by discovering that certain cells out of which some tumors are constructed are more susceptible to harm by exposure to x-rays than normal cells and that a part of the body bearing such a tumor can be exposed long enough to kill the tumor cells but not the cells of the healthy tissues surrounding it. All these things, therefore, present the wide possibilities of the x-ray; the discovery of all the possibilities is far from complete.

But when it comes to a matter of determining when the use of x-ray will be of value in a given case, one should let the doctor decide. For it must be remembered that up to twenty-five years ago medicine was practiced, fractured bones were set, cancers of the stomach were diagnosed without the help of x-rays. Today doctors still depend on their eyes, their ears and their finger tips for diagnosis of disease. True, some conditions cannot be discovered without the x-ray, others require exact confirmation by the x-ray, but the great majority of human ailments are still obvious to the doctor by the use of his natural senses.

Do You Freckle?

WITH the summer fast approaching, our thoughts are turning to glorious sunlight of beaches and parks. The boys hope that within the space of a day's or two weeks' outing in the country they may return to the canyons of city existence with the enviable tan of the lifeguard. But the growing girl sees summer and sunlight with joy tinctured a bit with sadness, for summer sun means freckles.

Freckles are those small flat spots on the skin which vary in color from hardly perceptible light salmon to darkest brown. They ordinarily are found on parts of the skin exposed to the air, to heat, and particularly to the rays of the sun. Persons with light skin and red hair show freckles more often and to greater degree than their darker brothers and sisters, although this is not universally true; medium dark skinned persons, such as mulattoes, are very prone to evidence freckle-like spots.

Children are not subject to freckles before the fourth year of life. Freckles appear along about the years when their absence would best fit the social requirements of our race and climate.

Why the rays of the sun cause freckling in some and not in others cannot be answered with assurance. Sun rays have the faculty of producing pigment in excess of the normal amount present in almost all persons. The pigment lies in the lowest layer of the superficial scurf skin, and not in the true deep skin. It seems that some other agency than the sun's rays alone must be a factor in the production of freckles because they sometimes appear on sites that have never been exposed to the sun. We must remember too that freckles seem to run in certain families. As a matter of honesty, medical scientists clothe their ignorance of the moment by talking of susceptibility. Some persons never freckle no matter how intense the exposure to the sun's rays, and others freckle if they just venture to walk across the sunlit street without their sunshade.

The best and to a degree the easiest treatment for freckles is their prevention. Those who know they are susceptible (see how that word crops up), but wish to retain a skin free from these colored spots, must simply avoid exposure to the direct rays of the sun during summer. In this day of outdoor sports, such a statement is paramount to an injunction against these desirable adjuncts to a happy outing or summer vacation. However, application of a good cold cream free of miscellaneous medical ingredients may be sufficient to prevent the passage of the sun's rays to the pigment provoking cells.

Drug stores and beauty parlors offer freckle removers. For these to be effective, the skin must be removed by visible or insidious blistering down to that layer of the skin which contains the little granules of pigment. The new scarf-skin is then for a time free of the pigment, but as the granules of pigment collect again in the replaced cells, the freckles make their appearance once more, possibly more marked than before.

Bleaching has been practiced with claims of varying success.

Home treatment by prescriptions from physicians who feel justified in giving such must be applied only on the individual area of the freckle; otherwise both the colored spots and the skin free from excess coloring share in the shedding process. Mechanical and electrical means have been used by individual practitioners.

Left alone, freckles usually become less pronounced with the coming of autumn. When they sometimes persist during the winter months, they are known as cold freckles. In older persons a process similar to freckling may make its appearance, independent of exposure to the sun.

A word of warning must be sounded regarding spots on the skin which may for a time look as harmless as the simple freckle. Freckle-like spots, even in young persons, may be a symptom of a serious skin disease (fortunately very rare). If colored spots appear early in life, seem more persistent, and especially if the skin is rough or warty, a physician should be consulted to determine if any other condition than the common garden variety of harmless freckle is present.

HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

Published by the American Medical Association
535 North Dearborn Street, Chicago

Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Predetermining Sex of Infants

One of the chief desires of human parents is to be able to determine the sex of a child before its birth. If the fond parents could definitely determine that the prospective progeny would be either a boy or a girl as might be wanted at the particular moment, it is likely that the birth rate would increase. Therefore, the biologists have spent many hours in their laboratories in search of the mechanism that governs the determination of sex, and it is needless to say that thus far they have been practically without success.

Various theories have been advanced from time to time, but none has been supported by sufficient experimental evidence to warrant its being given a moment's credence. For many years one of the most popular theories was that the sex of the child was determined by one or the other ovary of the mother and that the father had nothing to do with this factor; other theories were that the matter was influenced by the tides, by the position of the mother or the father at the time the infant was conceived, and by similar ludicrous conceptions of biologic mechanisms.

More recent investigations have been devoted to a microscopic study of the cell itself and there seems now to be no question but that the nucleus of the cells varies in chromosome content according to the sex of the prospective young. The chromosomes are colored threads of tissue that appear within the nucleus, which is the central portion of the cell. Thus far many animal species have been brought within the operation of this law, although the human sex cells studied are subject to differences of opinion on the part of the scientists. The number and the nature of the chromosomes seem to depend on factors coming from both parents. Such a view is, of course, quite reasonable, particularly when one realizes that experience shows that the child has many qualities that represent the contributions of both parents.

A Sane Fourth of July

About this time of the year it is customary to issue an appeal for a safe and sane Fourth of July. It has been reported that 1,153 persons were killed and 21,520 injured in the United States in five Fourth of July celebrations from 1903 to 1907. Some years ago, *The Journal* of the American Medical Association was instrumental in collecting the statistics of Fourth of July deaths and accidents. Year after year these statistics were published in the campaign of education, so that finally a day came when there was not one death from lockjaw following the annual Independence Day celebration.

Unfortunately the campaign of education cannot rest on its laurels, but must be made continuous. Already there is agitation for a return to the old vanished Fourth of July by those whose patriotism emphasizes itself chiefly in noisy lawlessness. Those who are interested in the prevention of unnecessary mutilations will see to it that the national sanity is kept as near to par as possible.

Deaths from Diphtheria

The American Medical Association has just made available the records of diphtheria mortality in the cities of the United States with a population of more than 100,000. Throughout the country the use of diphtheria antitoxin and the application of the Schick test have resulted in a lowering of diphtheria mortality rates.

The disease is one which has a considerably higher mortality in the white than in the colored race, so that cities in our southern states are likely to have lower diphtheria rates than northern cities. For this reason, it is interesting to know that New Haven had the distinction of registering the lowest diphtheria rate of any northern city during 1924 and that it was excelled only by Nashville, which has a large negro population. Low rates in Norfolk and

Richmond were noteworthy. Cincinnati, Grand Rapids and Toledo showed marked decline from previous years. Nashville, Louisville and Birmingham in the South; Kansas City and St. Louis in the Middle West, and Baltimore in the East likewise had exceptional records. On the other hand, Worcester, Boston and Springfield had exceptionally high rates during last year.

For some reason the cities in the Mountain and Pacific states continue to have diphtheria mortality rates in excess of what might be expected. This is explained particularly by the undoubted epidemic prevalence of diphtheria on the Pacific Coast in the last five years. On the other hand, we know that diphtheria is a preventable disease, and it would seem to behoove this section of the country to enforce preventive measures so that epidemic conditions might be overcome.

Broken Glass as a Poison

From time to time newspapers recount the fact that persons have been severely injured by swallowing particles of glass. During the World War phobias arose in this connection, and charges were made of wholesale attempts to poison the citizens of warring countries through the sale of cooking utensils that contained in their linings material that readily disintegrated, yielding sharp chips which would be swallowed by persons who ate food prepared in such vessels.

In England, one observer found that eight out of eleven samples of jelly in glass containers showed the presence of particles of glass, and another analyst found eight samples out of forty-nine which contained glass fragments. Again the charge was made that chips of enamel or glaze were responsible for appendicitis and cancer without the slightest evidence that such was actually the case.

In this country, it is quite common to pack fruits, vegetables and jellies in tin containers, whereas in England there is a sort of general aversion to material packed in this way. Actually food may be packed satisfactorily in both glass and metal containers. The ministry of health of Great Britain recently determined to make investigations to find out whether danger actually existed from improperly manufactured glazed and enameled cooking utensils. It was found that lead is used in preparing the glaze on cooking ware and that, if the glaze is poorly made, it is possible for the material of an acid character cooked in such vessels to be contaminated by lead.

This was particularly the case when vegetable broths, meat broths, apples and rhubarb were subjected to prolonged cooking in glazed utensils. The investigators, therefore, were inclined to recommend either that lead glazes be forbidden in the manufacture of such ware or that the process be so worked out as to develop a glaze which would be soluble only with difficulty even on prolonged heating.

Careful tests were made of enamels from hollow-ware, which consists of metal to which an enamel mixture has been applied in a thin coating. It was found that boric acid and occasionally small quantities of antimony and tin may be dissolved from the walls of enameled ware under exceptional conditions of prolonged heating of acid substances. However, it was stated that "the probability that undesirable constituents in significant amounts may be dissolved from enamel hollow-ware during the ordinary processes of cooking may be regarded as remote."

M. F.

LAUGHING AT THE VOLSTEAD ACT

MUCH energy and money are rightly spent by the government in preventing rum-runners from landing on our coasts or crossing the international boundaries. But a vast home industry in alcoholics, conducted under the guise of selling "patent medicines" seems to interest officials but little.

Take the case of Lyko, for instance, which was put out by a distilling company in process of liquidation and extensively advertised and sold through the middle west. Lyko contained over 22 per cent. of alcohol—more than twice the strength of pre-Volstead champagne—and the chemists of the American Medical Association who analyzed it found that there was nothing in it to prevent any one who wished from using it as a beverage.

Tona-Vin was another one of the ten best sellers in the alcoholic "tonic" line. This aid to the thirsty was introduced in a way that was as novel as it was effective—by extensive sampling. In one city alone 50,000 bottles were given away in order to establish its popularity. The saloon in its palmiest days was never so liberal. Tona-Vin was essentially wine (alcohol, 18 per cent.) with a dash of wild cherry and a suspicion of bitters; more palatable than many cocktails.

Then there was Vita-Pep—wine with a little pepsin, rennin and vitamin B. The 16 per cent. of alcohol that this toddy held was impaired not at all in palatability or potability by the

innocuous additions that the permit of an easy-going internal revenue department implied changed wine from a beverage into a medicine.

No list of the popular, "legal" alcoholics in arid America would be complete without Tanlac, which the American Medical Association chemists reported was essentially a wine to which had been added some herbs, bitters, glycerin and a small amount of laxative. At the height of its vogue its chief exploiter is said to have sold out his interests for two million dollars!

One of the latest additions to this motley group of nostrums that have nominally been sold within the law but actually have violated its spirit is Karnak. It is marketed by men who seem to have had rich experience in exploiting "patent medicines" whose most powerful ingredient is alcohol.

In spite of the fact that Karnak contains 18 per cent. of alcohol, it is advertised under the claims that it "contains no powerful drugs" and is free from "habit-forming drugs"—claims which contradict some of the best established facts in human experience.

The advertising campaign of Karnak is typical of products of this type. It is said to be the discovery of "M. Pierre André, noted French chemist." There is no such noted French chemist. The sale was first pushed in the smaller and medium-sized cities of the Middle West. In large cities such as New York, Chicago, Boston and Philadelphia, Karnak was not advertised. This may have been due to the high advertising rates of metropolitan newspapers, or it may be that the ease with which bootleg alcoholics can be obtained in large centers makes the demand for alcoholic "patent medicines" less acute.

Careful experimental work done by the American Medical Association chemical laboratory and further checked by pharmacologic experiments at the University of Illinois brought out the fact that there is nothing in Karnak to interfere with its use as a beverage.

In view of the foregoing facts, state and federal authorities might well take some official notice of the vast trade in alcoholics that goes on without let or hindrance within the borders of the United States. Such activity might not endear them to those newspapers that willingly open their advertising pages to the exploitation of these thinly disguised forms of booze, but it would do much to make the right-thinking citizen believe that official enforcement of the Eighteenth Amendment and the Volstead Act is more than a theatrical gesture. A. J. C.

BIG BRAINS AND LITTLE BRAINS

ANTHROPOLOGY is the scientific study of man and deals largely with the structure of the human body. Physicians have given attention to this subject from time immemorial. Previous to the period of scientific knowledge, the view was always held that a big brain is preferable to a small one and that the great workers of the world were men with large and heavy brains. Indeed, the view is so well established that "big-headed men" are usually given credit for the mental capacity that the slang use of the term covers.

It is well known that superiority and size do not always go together so far as concerns other functions of the body. It is perhaps true that a large biceps muscle is capable of lifting more weight or exerting more force than a small one, but a fat man is not necessarily superior to a thin one, even in physical performance.

Recently, Dr. H. H. Donaldson established the fact that tall persons have heavier brains than do short ones, the difference amounting to as much as 18 per cent. The human brain is composed of cells called "neurons." The number of neurons in the brain seems to be characteristic for each species of animal, and is therefore fixed within definite biologic limits. The conclusion naturally comes that a heavy brain is heavy because the individual cells that compose it are larger and because there are many more of the cells. Whether the complexity of the larger cells or neurons has anything to do with the function of the brain is not yet established.

The statistics seem to show that a heavy brain yields a better performance than a light one, but it will require much more scientific study before any one can say definitely that physical development of the brain will yield better mental capacity. M. F.

TWO ASTHMA "CURES"—RINEX AND RAZ-MAH

DID one believe the "patent medicines" advertisements, it would seem unnecessary to suffer from any ailment.

The victim of epilepsy has the choice of at least a score of sure cures for a condition that medical science so far has been unable to conquer. The consumptive can be brought back to health by any one of fifty-seven varieties of positive specifics, none of which is known to the physician. For a person to die of cancer is foolish; there must be at the lowest computation 200 certain remedies for this scourge of modern life—all unknown to science.

And when it comes to the relief and cure of such simple and trival conditions as asthma and hay fever—intractable as the physician frequently finds them—there is a choice of dozens of remedies each of which is guaranteed to banish these unpleasant conditions if the sufferer only has faith—and cash.

Two comparatively recent additions to the asthma and hay fever cure field are Rinex and Raz-Mah. The first named is said to be a physician's prescription that has been developed and perfected in successfully treating more than 7,000 cases of asthma, hay fever and other respiratory diseases. Rinex, we are told, "Kills Colds Quick," and relief from asthma is guaranteed. It "instantly attacks the toxic poisons," we read; just what it does to the poisons that are not toxic deponent sayeth not.

So interesting are the claims made for Rinex that the chemists of the American Medical Association were asked to analyze this marvel and pass the information it found on to a palpitating world.

The Rinex "treatment" comes in the form of capsules and tablets. The capsules, when made to give up their secret, stood naked and unashamed as a mixture of three well-known drugs: Aspirin, phenacetin and quinin! The tablets were even less remarkable for they were found to be nothing more esoteric than baking soda and sugar. Is it any wonder the makers and sellers of "patent medicines" fight to the last ditch against having to declare the names and quantities of the drugs composing their panaceas?

And what about Raz-Mah? The slogan for this product is: "To sleep tonight, use Raz-Mah today." How Raz-Mah originated is a story in itself—in fact, two stories. According to the tale told by the advertisers to Canadians, Raz-Mah was developed by a Mr. Templeton "by slow and careful study and experiment over several years." Citizens of the United States, however, are told that Mr. Templeton learned of the product from "a chemist friend."

Raz-Mah, like Rinex, comes in capsules, but without tablets as a side line. The chemists of the American Medical Association were again implored to tear aside the veil of secrecy that hid the true inwardness of this therapeutic marvel from the prying eyes of the multitude. And again came disillusionment.

Raz-Mah, which was developed by slow and careful study and experiment, or was a hot tip from a chemist friend, as you like it, was found to be our old friend aspirin again, this time mixed with a little charcoal and caffein. Ain't Science wonderful? ——— A. J. C.

POISONING FROM FIREWORKS

MANY years ago numerous cases were reported of serious conditions developing among workers in factories in which yellow phosphorus was used in the manufacture of matches and fireworks. Workmen in the roach paste and match industry developed severe destruction of the bones, particularly of the jaw, from the repeated inhalation of the fumes of phosphorus.

Recently Drs. Dwyer and Helwig observed a child poisoned by fireworks containing phosphorus. A three year old boy ate a "spit devil." He had pains in the stomach and vomited frequently. He became drowsy; his skin was ashen gray. His heart became rapid and his liver was enlarged. In spite of all that could be done in treating him, he died four days after eating the material that contained the phosphorus.

The division of industrial hygiene of the New York state department of labor has records of seven deaths of little children who put in their mouths such fireworks as "spit devil," "son-of-a-gun" and "devil-on-the-walk," which are supposed to be ground under the heel and which continue to crack, spit and sputter when used in this way. This type of fireworks is made of such chemicals as potassium chlorate, iron oxid, magnesium carbonate and gum arabic with several per cent. of phosphorus.

Investigations as to the best methods of treatment show that the thing to do is to give as quickly as possible several tablespoonfuls of liquid petrolatum or mineral oil. This oil will dissolve the phosphorus, but it is not taken up by the stomach and intestines so that it will not be absorbed into the body, as would be the case if castor oil were given.

As soon as possible a physician should be summoned, who will wash out the stomach and get as much of the poison out as is possible in this manner. All such treatment must be given immediately, as the absorption of the phosphorus by the body will usually result promptly in the death of the child. M. F.

If You're Wise, You'll Exercise

BY JOHN T. LEMOS

I know you'll like this page. Nearly all boys and girls want to play games and exercise. But it's a good plan not to play too hard, especially after meal time, and to be sure that you are developing yourself all around. Can you draw Chubby Bear?

Now all the folks
Who're really wise,
Believe in taking
Exercise.

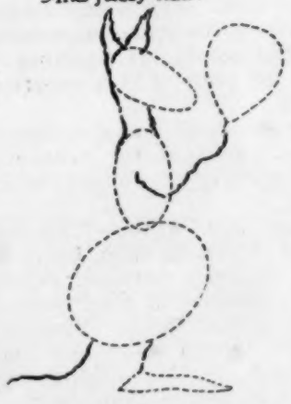
They know it makes them
Bright and gay,
And full of energy
All day.

Here is a lad from
Healthy Land,
Who thinks that exercise
Is grand.

He owns a little
Chubby BEAR,
With bright black eyes
And fuzzy hair.

This little playmate,
Fat and strong,
Is happy as the day
Is long.

And when he enters
In a race,
He nearly always
Wins first place.



He often plays
With KANGA ROO
Who likes the exercises
Too.

They both play tennis,
Swim and ride,
Take Daily Dozens
Side by side

And when their busy
Day is o'er,
Sleep right outside
Their master's door

BOOK REVIEWS

CHILD HEALTH LIBRARY. A series of ten books by practicing specialists, giving the latest and most authoritative information on every phase of child health. Edited by Dr. John C. Gebhart, with an introduction by Dr. Haven Emerson. Leatherette. Pp. 1069. Robert K. Haas, Inc., New York. 1924.

LITERATURE in tabloid form is increasingly popular in these busy days. Many persons are tempted to dip into the booklet which can be slipped into the pocket, and read in an hour, who hesitate to tackle a larger volume.

This attractive series of handy units (they measure only 3½″ x 4″) include the following topics:

Prenatal Care and the Baby's growth, Dr. Harbeck Halsted.
Babies—Their Feeding and Care, Dr. Louis C. Schroeder.
The Neglected Age, Dr. Bernard S. Denzer.
Dangers of the School Age, Dr. M. Alice Asserson.
Communicable Diseases of Childhood, Dr. Stafford McLean.
Hygiene of the Mouth and Teeth, Dr. Thaddeus P. Hyatt.
What Children Should Eat, Lucy H. Gillett.
How Children Ought to Grow, Dr. John C. Gebhart.
Psychology of the Child, David Mitchell.
Educational Problems, David Mitchell.

The authors have put into condensed but readable language the most recent and approved knowledge of the subjects on which they write. This series will be found useful to mothers, nurses, teachers, and all others who have to do in any way with the care of children.

J. M. D.

THE PHYSIOLOGY OF EXERCISE. By James H. McCurdy. First edition. Cloth. Price, $3. Pp. 242. With numerous charts. Lea & Febiger, Philadelphia. 1924.

THIS book is one of a series edited by R. Tait McKenzie of the University of Pennsylvania, covering various aspects of the field of physical education. Its author has been for many years the head of the physical education work at the Y. M. C. A. College in Springfield, Mass., where his particular teaching has been in physiology and athletics. He has done research work in physiology at Harvard and Clark Universities, and, during the war, he was in charge of athletics with our army in France. His training and experience, therefore, have particularly fitted him to deal with this subject.

When Dr. McCurdy has been teaching athletes physiological results have been prominent in his mind. When he has been teaching physiology he has always been conscious of its extreme importance in big muscle activities. Naturally this combined point of view can be traced in the book, which is designed for students of physical education and workers in that field.

The first part is devoted to the general effects of exercise in producing health and efficiency. Individual chapters deal with a classification of exercise into active, support, passive and postural types, and the effects of each on heart rate, blood pressure, respiration, blood and the neuromuscular system. The discussion includes the results of many series of tests upon both sexes, and individuals and groups of different ages, together with the modifications in effects produced by training. In many instances distinctions are made among the effects of exercises of speed, strength and endurance.

In the second part particular activities are considered in their physiological bearings, gymnastics, athletics and aquatics being the main divisions. Football, basketball, soccer, track, marathon running and mountain climbing in the athletic group, and swimming and rowing in the aquatic group are specifically discussed with their observed effects on organic function; some evaluation of them in terms of character formation is added. The book concludes with chapters on physical efficiency tests and training. The question as to whether athletes die young is answered as far as available data make such an answer possible.

Not the least valuable part of the volume is contained in the extensive bibliographies given at the end of each chapter and probably no man in the country is as well equipped as Dr. McCurdy to give such bibliographies. Its approach to the subject is unique as far as the reviewer's knowledge goes. It should be possessed and studied by all who are interested in physical education or athletics and would by no means be out of place in the libraries of those who are interested in health, particularly the health of young Americans.

D. R.

MEDICAL AND SANITARY INSPECTION OF SCHOOLS FOR THE HEALTH OFFICER, THE PHYSICIAN, THE NURSE AND THE TEACHER. By S. W. Newmayer, A.B., M.D. Second edition. Cloth. Pp. 454. Lea & Febiger, Philadelphia. 1924.

THIS book is full of instructive matter to those interested in the subject. Following a history of medical inspection, such topics as the medical inspector, the school nurse, systems of inspection and records are splendidly presented. The writer's advice under the heading "auxiliaries to school inspection" is full of wholesome suggestions to the beginner that could be given only after the years of rich experience which this doctor has had.

An illustration, at least, of a real sanitary drinking fount and a modern univent for ventilation would have added to the chapter on construction of school buildings.

His statement that "open-window" classes for malnutrition should be replaced with hours of special instruction during intervals between regular classes shows the author's courage and good judgment.

In the section on communicable diseases, omission of the regulations of certain states and the insertion of the quarantine and school exclusion requirements as laid down by Model Health Code of the American Public Health Association might have led to regulations that would add to the school attendance.

Part V discusses health of teachers and contains much valuable material as do the discussion and data on mentality.

In spite of some shortcomings the book has many virtues and contains enough information to warrant it a place in every school library. It will also be useful to any public health worker.

O. B. N.

HEALTH NEWS AND VIEWS

BABY ALUMNI ARE HOSPITAL GUESTS

Baby alumni parties were the most interesting events of National Hospital Day celebrations throughout the United States on May 12.

On that date, which is the anniversary of Florence Nightingale's birth, many hospitals invited to a party every mother and baby that had occupied a place in their maternity department during a given period of years.

In some institutions, baby clinics were held at which each baby alumnus was given a thorough physical examination. After being duly weighed, measured and examined, prizes were given to the healthiest baby in a certain class. Appropriate souvenirs of the occasion were presented to each child.

Hospitals generally held open house on May 12, and thousands of visitors came to view the equipment and to learn of the system of organization which makes the modern hospital such an efficient place for the care and treatment of the ill.

MANY ABSENCES AMONG WOMEN EMPLOYEES

Women employees are absent more than twice as many days during the year as men employees, according to a recent investigation made by Harry W. Hepner of Syracuse University and published in the *Journal of Personnel Research.*

One large industry, in revising its salary schedules for men and women with a view to equalizing them, made an investigation of absences. It found that over a period of three months, women employees lost over 6 per cent. of their working time through absence; men during the same period lost only slightly over 2 per cent. Both sexes worked under office conditions that were precisely the same.

As a result of its investigation the industry decided that women did not deserve the same pay as men even when they held the same sort of position.

On pay days, there were very few absences among either men or women. Fifty employees were absent on the day before pay day and only six on the day itself.

FIRST AID FOR PERSON IN CONVULSION

Here are a few "do's" and "don'ts" which may some day prove of service to you if you see a person in a fit or convulsion. They were given by Dr. William L. Munson, a district state health officer of New York, in a recent radio address:

1. Send for the doctor at once and be sure to leave word what the trouble is, for then he will come quickly and will know what to bring with him.

2. See that the person suffering is placed where he can do no injury to himself or any one else. This usually is best accomplished by placing the patient on his back on the floor. Do not use a couch or chair. There is danger that another convulsion may occur and the person will throw himself on the floor and be injured.

3. Loosen the clothing about the neck and chest to permit easy breathing.

4. Observe just how the patient acts, that is, what part of the body is involved in the convulsion and its character, the length and severity of it so that you may make an accurate report to the doctor when he arrives. In certain cases the doctor has to depend upon the history that he gets in order to arrive at a proper diagnosis.

The things that you should not do are perhaps more important than the ones you should.

1. Do not try to revive the patient by dashing water in his face or giving inhalations of strong aromatics. You may cause strangulation.

2. During the seizure do not try to pry the mouth open, you may break the teeth. However, if the convulsions are recurrent, it is well between attacks to insert something between the jaws large enough and firm enough to prevent the teeth from closing on the tongue.

3. Do not try to give medicine or stimulants by trickling them down the throat of an unconscious person. You may do a great deal of harm by this if the medicine goes the wrong way. Medicines that are of any value have to be inhaled or given by a hypodermic syringe and should be used only by a physician.

4. Do not try to get the patient on his feet too soon; wait until the doctor arrives.

DON'T USE BUNION PADS TO SHIELD VACCINATION

The U. S. Public Health Service has issued a warning against the use of bunion pads for shields or dressings in vaccination against smallpox. Several fatal cases of tetanus, or lockjaw, following the use of bunion pads in this manner have recently occurred in the United States.

Many persons think that they have found the ideal protector for the newly vaccinated arm in the bunion pad and are recommending it widely to their neighbors. The Public Health Service warns against any kind of shield as a vaccination dressing.

A shield tends to prevent evaporation, to retain heat, moisture or discharges, to obstruct drainage and to create conditions favorable for the development of bacterial invasion, especially by the tetanus organism, it is said.

FINED FOR BREAKING HEALTH LAWS

During the past year the health department of New York has prosecuted 22,481 criminal cases and collected $103,217 in fines for improper food and drug sales, it was recently announced. Prosecution of such cases acts as a deterrent against similar violations.

One of the largest penalties was a fine of $500 imposed on a lunchroom for selling three barrels of clams which were not properly tagged so that they could be traced in case some person contracted typhoid fever as a result of eating them.

A merchant was fined $250 for selling German grits which contained a quantity of cornmeal. The trade standard requires that this commodity be 100 per cent. buckwheat. A dairy was fined $500 for selling adulterated milk, and a chemical company $100 for having on sale a quantity of adulterated witch hazel. A druggist had to pay $50 for selling patent medicines that had not been registered with the health department.

A physician was sentenced to the penitentiary for filing a false certificate in connection with the death of a woman.

Underwood & Underwood

START THEM YOUNG

Small children rarely have fear of the water and often develop into excellent swimmers. There are few exercises more healthful than swimming, so for those who live near lake or sea it is a good plan to start the children young.

Pacific & Atlantic

ON THE JUNGLE RACK

Schools will soon discharge their childish hordes on the summer playgrounds. Thousands of new recreation spots are to be opened this year, in cities and villages all over the country. This jungle rack on which the children clamber like monkeys is a favorite part of the equipment of a New York City playground.

Ewing Galloway

A TENEMENT PLAY-GROUND

The tenement alley is not an inspiring spot for play, but it serves much better than none at all or than a street made dangerous by motor cars. Large cities without adequate playground provision have taken to roping off the streets during certain hours or in certain districts to make a safe play space for the children in crowded neighborhoods.

International

DIVING EXERCISES IN POOL

European swimming pools are much like ours, as can be seen by this photograph of a Berlin pool. The lesson for the day is on diving and certain diving exercises are being carried on in the water.

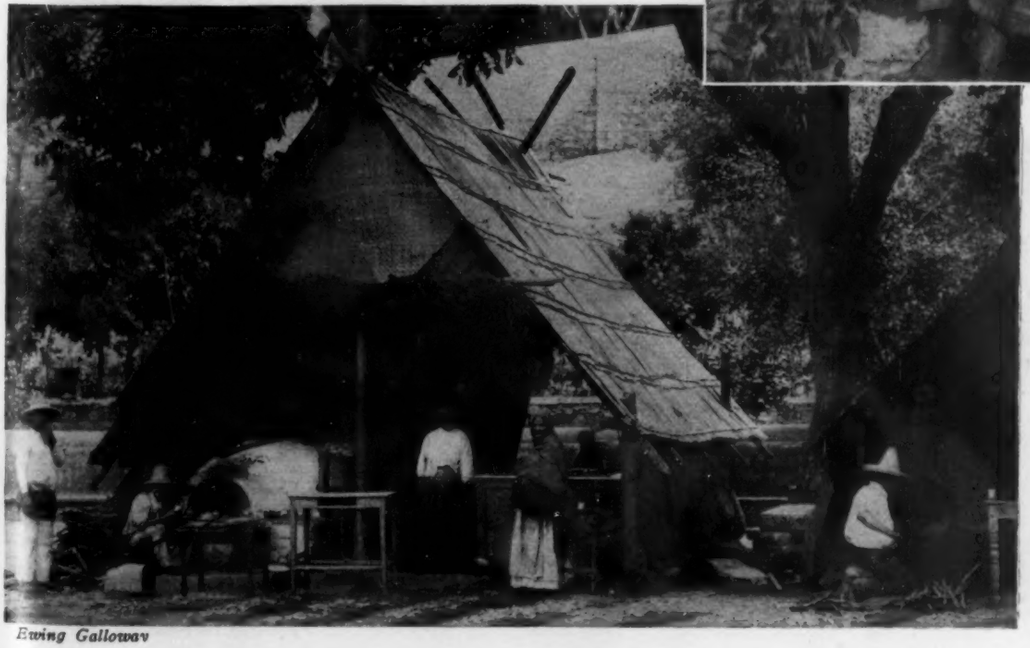
Edith S. Watson

TWO TASKS AT ONCE

You wonder how this mother can pick beans and hold the baby, too. But mothers are wonderful folk. This photograph was taken in the fields at a Dukhobortsi settlement in British Columbia.

THEY PAY NO RENT

These bakers in Guanajuata, Mexico, are beating the rent game. They bake their loaves in outdoor ovens under temporary shelters.



Ewing Galloway

PUBLIC PIPES

Hookah smokers in the streets of Bombay, India, sell a smoke to the passerby for a penny. This is one of the best known methods of spreading disease germs, for the stems of the pipes are never sterilized.

NEW TYPE OF LIFE BUOY

Here is a new type of life buoy recently invented in Germany. It cannot sink and is capable of maintaining a person for several days until calls may bring help. The buoy has a watertight window and is equipped with a receptable for food and a pistol for signaling.

SCHOOL DAYS IN INDIA

At uncomfortable low benches sit these scholars of Bombay. Young and old are grouped together, the women in curious headdresses. On the platform are the honor pupils; at the side the teachers.

Photos by International

MAKING SANITARY DRINKING FOUNTAINS SANITARY

So-called sanitary drinking fountains are not always sanitary. The following nine points from a recent *Iowa Health Bulletin* tell what a drinking fountain should and should not be, if it is to be called sanitary:

1. The fountain should be easy to drink from without mouth, nose or face coming into contact therewith.
2. The jet orifice should be so located that water dropping back into the bowl from the mouth of the user cannot come into contact with the opening for the jet.
3. Droppings from the mouth, instead of getting back to the orifice, should be carried away to the waste pipe.
4. The apparatus should be constructed so that it is impossible to cause it to squirt water.
5. Pressure regulation should prevent the water issuing at times with unnecessary force, and prevent the flow from dwindling to a mere trickle with consequent tendency of the users to get into contact with the fountain in drinking.
6. The fountain should not be constructed so that the janitor will try to get water from it to fill buckets, or will use the bowl as a place to wet a mop or broom.
7. The fountain should not be attached to a lavatory bowl or other place where wash water or other dirty water is likely to fall into the orifice.
8. All water emitted should fall into the bowl and the waste pipe should be big enough to take the flow away promptly.
9. If the fountain is to be placed out of doors for winter use, it should be frost proof. That is, the waste device should be such that on shutting off the fountain the water will be drained away from the discharge pipe to a depth such that the water will not freeze in ordinary winter weather.

CAN TELEPHONE X-RAY PHOTOGRAPHS

Telephoning x-ray photographs is a recent scientific discovery in the field of health and medicine. By such means eminent specialists can make x-ray diagnoses of persons thousands of miles away.

A negative showing the bone structure of the human hand was sent from New York to Chicago in seven minutes on Wednesday, April 15. Details were not lost in the procedure, and an accurate examination of the film was possible.

"The time element in the diagnosis of an injury or ailment by a specialist is most important," said W. S. Kendrick of the Victor X-Ray Corporation of Chicago, following the reception of the first telegraphed x-ray negative. "In complicated fractures or other bone injuries, a quick diagnosis is invariably desirable in order to prevent infection or other complications. A saving of hours or days means everything to the patient."

During the recent tornado in the middle west, a woman received a severe fracture of the knee. The medical men available, who were not x-ray specialists, were unable to treat her, and it was necessary to take her to New York. If an x-ray film could have been sent by wire, a specialist would have been able to reply immediately with instructions for preventing permanent lameness or other complications without the necessity of going to New York. The possibility of sending the negatives by wire brings the specialist to the small community.

Dr. D. W. Coolidge of the General Electric Company has perfected a portable x-ray equipment which a doctor can use anywhere by connecting it with the household lighting circuit. These outfits have in a measure eliminated the necessity of moving a patient to a hospital for x-ray examination, and now telephonic transmission of photographs indicates that soon it will not be necessary to take patients to large cities in order that the services of specialists be available.

MRS. JOHN BULL'S FAMILY

"How Mrs. John Bull Rears an A-1 Family" is the title of a recent leaflet published by the National League of Health, Maternity and Child Welfare, London. Mrs. John Bull does fifteen things:

1. She attends an antenatal clinic before each child is born.
2. Her first baby was born in a maternity home, as Mr. and Mrs. Bull could not get a house, and were living in lodgings.
3. She takes the younger children to the infant welfare center at least once a fortnight, and learns all the mothercraft she can.
4. She breast-feeds her babies regularly by the clock during the day and gives no night feedings.
5. Each child after weaning has a pint of milk daily and no tea, but plenty of water to drink.
6. She keeps all food protected from flies.
7. She cooks simple, wholesome meals tastily, with plenty of fresh fruit and vegetables.
8. She has her own teeth and those of her children attended to regularly.
9. She has simple furniture and little of it, and keeps everything scrupulously clean and tidy.
10. All the family have frequent baths; the baby a daily one.
11. The baby has its own cot, and sleeps out of doors nearly all day.
12. All the children are in bed by 7 p. m.
13. The windows are always open day and night.
14. All the family takes plenty of exercise.
15. John Bull lightens his wife's tasks all he can.

GOOD MINDS ARE IN GOOD BODIES

Bright boys and girls are better runners, jumpers, baseball players and, in general, are better developed physically, than those not so intelligent, a recent experiment in Bloomington, Ind., indicates, says the Children's Bureau.

In that city public school children were given intelligence tests and rated according to standard tables. A group of high mentality and another group of low mentality were selected for physical tests. The results showed that the average level of physical development was higher among the children who rated high in intelligence tests than among those who rated low.

CHAMPIONS ROPE JUMPING

One of the most valuable exercises known and one of the most neglected is jumping the rope, says Dr. E. H. Arnold of the New Haven Normal School of Gymnastics, writing for the *American Physical Education Review.*

Oldest among the playthings of man, the jumping rope has an educational value scarcely known, Dr. Arnold declares. In these days of hunting for athletics for women, it is strange that fewer persons have not stumbled on this most feminine of exercises.

Rural schools with too small an attendance for organized games requiring large teams can use the jumping rope to advantage. The cry of "no equipment" need not be heard where the jumping rope is used skilfully. Any child can contrive to bring a rope for his individual use and a discarded rope from the farm will do service as a long jumping rope.

Dr Arnold says that the child gains a sense of rhythm, self-confidence and physical endurance through rope jumping, and with judicious handling any dangers of fatigue and exhaustion can be prevented.

QUESTIONS AND ANSWERS

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. If the question is of general interest, the answer will be published; otherwise it will be sent by mail. Questions are submitted to recognized authorities in the several branches of medicine and answers framed by them. The names of correspondents will not be published. Diagnoses in individual cases will not be attempted nor treatment prescribed. Answers to questions relating to beauty will be found in the "Healthful Beauty" department of this magazine.

Low Grade Focal Infections and Insanity

To the Editor:—What is a probable estimate of the percentage of cases in which insanity is due to a low grade focal infection, such as abscesses of teeth, tonsils and other organs?

J. B., Pennsylvania.

Answer.—A recognized authority, who has had a large experience in mental diseases, says he does not believe that low grade infections are of any importance in the causation of mental disease.

Scurvy

To the Editor:—Last summer my father developed a rash and the doctor said it was poison ivy; several months passed and it did not seem to get any better. He went to another doctor who called it oak poisoning, but a number of months have passed and there is no sign of improvement. The rash appears on his hands, arms and chest; it burns terribly and prevents him from getting much sleep. His teeth have become very loose and bleed easily and we can see him getting very thin and old looking. He is about 59 years old. The rash seems to get in the inside of his elbows and in the creases of flesh. This last month one knee has begun to slip out of joint and he often falls. Would you please explain symptoms of scurvy and beriberi? I am very much interested in nutrition, and am concerned because father does not eat potatoes, fruit, or many vegetables, although about the time this skin trouble appeared he was eating a great amount of cucumbers. Do you think his condition could be caused by diet?

J. S. B., Massachusetts.

Answer.—This sounds like a severe dermatitis from contact with something, such as poison ivy or poison oak.

We do not believe the mouth condition has anything to do with the skin eruption. Pellagra is, of course, always to be thought of but the eruption does not sound like pellagra and he does not have the other symptoms of pellagra.

Scurvy is a disease of nutrition, resulting from the absence of so-called vitamin C, which is present especially in citrous fruits, tomatoes, potatoes and some other vegetables.

The principal symptoms of the disease are general wretchedness followed by swollen, spongy gums, loose teeth, foul mouth, disturbance of the salivary glands, and hemorrhages of the mouth and the skin producing dark spots called petechiae. Hemorrhages also occur, in the severer cases, in the muscles and joints and underneath the membrane covering the bone in the vicinity of the joints, the so-called periosteum. The latter condition makes motion of the limbs extremely painful, especially in children.

This condition is prevented effectively by the use of the foods mentioned above and when these foods are administered the patient recovers with remarkable promptness.

Scurvy was a common and severe affliction in the old days of sailing vessels, when sailors on long voyages were deprived of fruits and vegetables containing this vitamin C.

Beriberi is an inflammation of the nerves, especially of the limbs, and is due also to the absence of a vitamin, in this case vitamin B, which is present in the hulls of unpolished rice. It occurs in epidemics among groups of men, usually laborers, who are fed on polished rice. The symptoms are pain, tenderness of the nerves, atrophy of the muscles, loss of sensation following increased sensitiveness, and, in the more severe cases, serious disturbances of the heart resulting in death.

Several forms of this disease are recognized, but it is impossible to describe the details in a brief reply. In this disease, as in scurvy, the improvement which follows the feeding of rice with the hulls on, or of simply administering an extract of rice hulls, is very remarkable.

The discovery that these diseases are caused by a lack of vitamins found in certain foods, a discovery of the last few years, has been one of the most gratifying and beneficent contributions to medical science.

Oxygen Vapor Spray

To the Editor:—Can you tell me whether oxygen vapor spray is considered effective for the treatment of pyorrhea? My case is not in the advanced stage.

L. E. W., Kansas.

Answer.—Authorities are of the opinion that the oxygen vapor treatment for pyorrhea has been exploited upon the unsuspecting because of its psychic rather than curative effect. The only possible aid to be derived from its employment would be in temporarily combating acute infective processes. It certainly has no permanent curative value in the treatment of pyorrhea.

Corns and Bunions

To the Editor:—Please advise me if there is a cure for corns and bunions. What causes them?

J. N. L., Louisiana.

Answer.—Yes, there is a cure for both conditions. Assuming that they are already present, the question of prevention does not apply in the given case, but the removal of causes is necessary to facilitate a cure.

Corns develop where there is an unnatural localized pressure or friction. They are originally conservative in function, the increase of the tough superficial elements of the skin preserving the soft parts beneath from destruction and ulceration. There is a penalty, however, for this abuse of normal tissues and it is the pain of the excessive and abnormal corneous elements of the skin pressing upon the sensitive nerves contained in the soft tissues supporting the corn.

The pain is the factor that calls most loudly for treatment. Naturally, measures to relieve these various local pressures are indicated. Removal of pressure, as far as is possible and redistribution of the remainder are the principles employed locally for relief. Paring the corns or reducing their size by applications usually affords temporary relief, but with the cause continuing their return is certain.

Transferring the pressure to other and larger areas by means of corn plasters, adhesive plaster and other

devices continues the relief, and thus by removing the exciting cause eventually cures the corn. With deformed feet and toes the relief may be complete only after surgical care has restored the deformed parts as near as possible to normal. Long confinement to bed by a serious illness is a sure eliminator of corns.

A good chiropodist understands the relief of these pedal pests but he is limited to more or less temporary relief in conditions demanding definite surgical measures.

Bunions are usually due to improper shoeing, particularly during the growing age. The short shoe with the pointed toe makes a very efficient bunion producer. The big toe must go somewhere and there is no other place to go than toward the smaller and more easily compressed toes. Once started, the prominence over the inner side of the joint receives more than its share of pressure from any shoe worn and this causes more or less continuous irritation of the deformed part. Here, as with the corn, a shifting of pressure by means of appliances and pads to surrounding or less susceptible parts will greatly relieve the distress and allow the irritated portion to become as nearly normal as possible, depending on the amount of the original deformity.

Severe deformities are best remedied by operation. The surgeon removes either the prominent part of the bunion or the whole head of the bone involved. Properly devised operations give great relief.

Water Purification

To the Editor:—1. The following statement appeared in a newspaper: "To purify water with iodin, add three drops to each quart of clear water and eight drops if the water is cloudy. Let stand 15 minutes then add a small pinch of sodium thiosulphite which will restore the taste." Would this amount of iodin cause any injury, if taken for two months in all water that was used? Would this amount kill all pathogenic bacteria? 2. Would aluminum sodium silicate, which is the chemical claimed to be used in the Twin City Water Softener, be injurious in any way if drunk daily? Salt is used in this softener for regeneration. Would there be any chemical action that would be injurious? F. T. M., Nebraska.

Answer.—1. The amount of iodin mentioned would probably not be injurious to persons with goiter. It should be remembered, however, that certain types of goiter are aggravated by the use of iodin in other than very minute quantities.

Since the concentration of the iodin is not given, it is not possible to state definitely whether this amount would be effective in disinfecting water or not. If it refers to the ordinary tincture it probably would be entirely effective.

2. The water softening material to which the inquirer refers is apparently zeolite, an exceedingly insoluble material. The reaction between hard water and zeolites results in the exchange of sodium for calcium, so that if we have for example 300 mg. of calcium carbonate and calcium sulphate in a hard water it will after softening with zeolites contain an equivalent amount of sodium carbonate and sodium sulphate. We would not expect this change to have any appreciable physiological effect one way or the other. In fact, there are a number of instances in which water softened by zeolite is being used continuously for drinking purposes without any indication of unfavorable results. In cases in which persons have been troubled with calcareous concretions in the bladder or kidneys the use of softened water should from a chemical standpoint be beneficial.

The use of salt in connection with the softening process is to regenerate the zeolite, that is, to put sodium back and drive out the calcium so that the material may again become effective after exhaustion. During the regeneration with salt the softener is connected to the sewer and all of the calcium, together with the excess salt, is discharged into the sewer before the softener is connected to the house system.

Spastic Paralysis

To the Editor:—I have a son 11 years old, a victim of spastic paralysis. His intelligence quotient is 70. Can you tell me if anything is being done or if any progress is being made in the study of the brain? We hear of marvelous discoveries being made in the realm of medicine; is there any hope of cure along this line? Also, can you tell me if by mental examination it can be determined what a handicapped child's future possible development may be? G. M. B., Illinois.

Answer.—Studies of the brain, unfortunately, will not help in such conditions as infantile spastic paralysis. The disease responsible for the paralysis has caused an actual destruction of certain parts of the brain and there is little prospect that anything could be discovered that would replace the parts that are gone. The best that can be hoped for is that methods can be found to make better use of parts that have not been destroyed and thus to compensate as far as possible for their loss.

The intelligence quotient is a means of expressing the proportional measure of native intelligence the child has, according to the particular tests applied. If accurate, this would convey the measure of possible development. Practically, the quotient is found to vary at different ages under appropriate training in many conditions. When, however, the defect is due to a destructive disease, such as that causing infantile spastic paralysis, the prospects for improvement are not great. It is possible with careful study of body and mind to determine the kind of activity for which a child is best fitted and for which he should be trained.

Teeth

To the Editor:—I wish so much to get some useful information that will benefit my daughter of 14 years in producing teeth. Do you think lime water will aid? If so, how is it prepared and taken? I can get it from the druggist, I presume. She now has her monthly periods and seems about normal. A year ago last October she had a severe case of appendicitis, a ruptured appendix. The operation was a success and I think her recovery was normal. She seems quite vigorous most of the time now. She has been slow about teething since babyhood. The teeth I am most anxious about are the first central ones on the lower jaw, for those two milk teeth have never fallen out for her permanent teeth. I am perplexed. She has since one or two years old had tonsillitis and that has kept her back and made her frequently ill. For the last five or six years she has overcome this to a great extent. She had five cavities filled in her molars a short time ago. Her parent's teeth are not close, but I wish I had given more attention when she was small to her food. I was in poor health, she had colic often and I was afraid for her to have anything but milk of my breast for two long years. It was a mistake I realize now. She is our only child. She now has, counting the two milk teeth, twenty-one in all. If you can give me some good sound advice I would be glad. Her gums are swollen at the extreme back of her other teeth now. G. W., Arkansas.

Answer.—At 14 years of age all of the permanent teeth have been formed, with the exception of the completion of the root ends of the second molars, and the roots of the third molars (wisdom teeth). At 14 all of the permanent teeth should be erupted, wisdom teeth excepted.

If any of the second teeth are missing at that age there are two probabilities. 1. The missing tooth or teeth may be congenitally absent; this means that by some freak of nature they have never formed and never will form. This is not of frequent occurrence but is seen many times by dental practitioners and not considered particularly uncommon. 2. The missing tooth may be impacted in the jaw bone in such a way that it cannot erupt. In a few cases by mechanical or surgical assistance, the impacted tooth may be brought into usefulness. An x-ray picture of the area in which the tooth is missing will disclose its presence or absence.

In either of the above cases it is clear that diet will have no effect in the development of missing teeth at the age of 14.

At her age, there should be twenty-eight permanent teeth in the mouth and none of the first (milk) teeth should be present. In some very delayed cases, the four second molars (one above and below on each side) and the four cuspids (eye teeth) erupt as late as the fourteenth year.

No doubt "the swollen gums at the extreme back of her other teeth" is evidence of the late eruption of her second permanent molars. The crowns of these teeth, however, have been formed for several years as is the case in all teeth, that is, the crown portion of the tooth forms completely many months before the tooth appears in the mouth.

The child is now too old for suggestions about diet to be of much service in the normal development of the teeth. However, a diet of green vegetables, fruits, milk, eggs, etc., will help to keep good teeth good.

Syphilis

To the Editor:—Will you kindly answer some questions for me concerning syphilis? The person in question contracted syphilis sixteen years ago and was treated at the time for a mild case. Apparently, it disappeared but has recently appeared again, now in the spinal fluid. He was treated a year ago by the injection of medicine into the spine. Then, as it reappeared last February, he was treated by medicine injected into the blood hypodermically, fluid being drawn from the spine once a week for ten treatments. The test showed a result of from four plus to two plus. He is now taking the very new treatment just endorsed. 1. What do you think of this new method of treatment? 2. Is it ever possible to cure syphilis when one has it in the spine? 3. Does the treatment have a tendency to cloud the mind, or is it the disease that does this? 4. If the infection is reduced to two plus or below, is there a likelihood of damage being done to the nerves and brain as the result of the four plus condition? 5. What damage does a condition such as this do to the eyes, and is it damage that can be cured? The oculist is the person that detected the condition in this person. 6. What is the best kind of life for one so infected to lead. 7. Is there any good book on the disease that I can get to obtain real information on the subject? 8. Does paresis or real insanity, as a rule, result? What is the outcome of a case that cannot be arrested? Also is two plus a bad condition?

S. J., Virginia.

Answer.—1. The new method of treatment is good in properly selected cases, when the treatment can be instituted early in the disease.

2. No.

3. It is the disease.

4. Yes.

5. It may produce optic atrophy which means a wasting of the nerve of sight and may lead to blindness.

6. One's life should be well regulated as to diet, exercise and sleep.

7. Any of the standard textbooks on nervous and mental diseases will give you the information desired.

8. General paresis develops in about 3 per cent. of all cases of syphilis. The tendency of general paresis is to grow progressively worse. Usually the patients die within three years after the disease develops. A 2 plus Wassermann does not indicate a rapidly progressive disease. It is found very frequently in mild cases.

Itchy Spots

To the Editor:—Since my army days in 1919 I have had a disagreeable itch on my inner left crotch. The skin has thickened very considerably and continues to scale off as it did from the very beginning. I have had this irritation since 1919 and have used medicines recommended by skin specialists for months at a time but with no relief. At present I am trying a tar ointment. Can you suggest a possible cure? I expect to marry very soon. Is there any danger of my inoculating another person? These itchy spots have not spread.

J. S. S., Iowa.

Answer.—This may be a ringworm infection of the groin, producing a condition resembling eczema. If it is, it is contagious and one might infect his wife. If so, a suitable ointment, which a physician can prescribe, will probably cure it. If it is merely eczema, an ointment containing tar or some x-ray treatments should prove beneficial.

Eczema

To the Editor:—I have a certain mild form of eczema on my little finger. At least the doctor says that is what it is. He gave me a yellow salve to apply, but I have been applying it for over a month and the eczema seems to keep spreading. It started as a very small patch on the knuckle of my finger and has spread, in the four or five months it has been there, so that it almost covers my finger. It is red and small blisters form with liquid in them. The whole thing itches very much at times. A yellow coating forms, which easily peels off. Several times the skin has cracked. I have been reading about it a little and have read that local irritation often causes it. But as I am a student and have not worked over three months at any one thing, I don't think that is the reason. I am in very good health, except rather susceptible to colds. I try out for the football and track teams and keep in pretty good condition all the time. My digestion is perfect, but I think that I eat too much; no pepper or mustard though. I would like to stop this before it spreads from my finger.

R. P. J., Kansas.

Answer.—The young man probably has a patch of eczema on the finger. Local irritation from scratching probably brought out this patch. He has had a tendency to it and he should have a proper diet mapped out for him. Sweets, candy, malted milk, chocolate, greasy foods, and sometimes a diet too rich in meat are factors in causing eczema. Locally, the best thing to use is some ointment, perhaps containing tar, which his physician should prescribe.

Disinfecting Books

To the Editor:—I am a student, and am buying second hand books. I fear that I may contract tuberculosis or some other disease from books from promiscuous sources such as dead men's libraries or musty book stores. Can you give me information or some source of information about fumigating or disinfecting these books so that I may run no risk from reading or handling them daily?

J. R. T., Virginia.

Answer.—The best disinfecting agent for books is formaldehyd gas. The books should be thoroughly

opened and should be arranged on perforated wire trays and exposed to the gas for twelve hours at a temperature of 80 C. (176 F.).

When only a few books are to be treated, in the absence of a special apparatus, they may be disinfected by placing two or three drops of a 40 per cent. solution of formaldehyd on every second page. The book is then laid in a closed box or barrel in which more formaldehyd solution has been sprinkled and left in a warm place for not less than twenty-four hours.

Tuberculosis is not usually regarded as sufficiently contagious to necessitate the disinfection of books. Without doubt, however, a sufficient degree of safety can be attained by disinfection without denying the tuberculous patient and family the privileges of the library.

The danger of infection of any sort being conveyed by books is slight. If the books are kept out of circulation for a short time or simply filled with formaldehyd if they must be "disinfected," no one need fear that books will be much of a factor in disseminating disease.

Soft Corns

To the Editor:—Please tell me a remedy for soft corns between the toes. I shall be very grateful.

R. B., California.

Answer.—Soft corns should be kept thoroughly clean and dry. They should be dusted with some inert powder, such as boric acid powder, and the parts should be kept separated. All pressure should be removed, as friction of the parts tends to make the corns recur.

Alcohol and Gray Hair

To the Editor:—Will you kindly advise me if alcohol will turn the hair gray? I note in your February number you recommend castor oil and alcohol. I have always heard from beauty specialists that alcohol would turn the hair gray. Will castor oil and alcohol stimulate the growth of new hair?

I. H., Maryland.

Answer.—There is no reason to suppose that alcohol applied to the hair will cause it to turn gray, nor in the experience of leading authorities in diseases of the skin and hair has such an effect been observed. Castor oil and alcohol may have some effect in stimulating the growth of new hair, through overcoming dryness of the scalp and exerting an antiseptic effect on parasitic organisms that may be present.

Locomotor Ataxia

To the Editor:—Local physicians tell me I am afflicted with locomotor ataxia, but none seems to understand the correct method of treatment. Is there a possible cure for this ailment, and, if so, what is the nature of such treatment? I see in an article written by Dr. W. A. Evans, newspaper writer, that the best known method is that of Frankel. Others are those of Franz, Crampton and McKenzie. Will you kindly explain these and where obtained?

A. M., Washington.

Answer.—Locomotor ataxia is a disease of the spinal cord due to infection with syphilis. The treatment, therefore, must be directed primarily toward the eradication of syphilis. Unfortunately, this late form of syphilis of the nervous system has proved to be very resistant to the remedies that are effective in the earlier forms of syphilis; treatment must often be very prolonged and intensive to secure results.

With modern methods, however, successful results are being secured in many cases. In judging of these it must be remembered that the disease, if it has progressed far, has irremediably destroyed certain nerve fibers and even though the disease be cured there will remain evidences of the destruction that has been done.

Treatment by systematic forms of exercise, such as those of Frankel, Franz and others, are directed toward the relief of one of the most troublesome symptoms, the ataxia or difficulty in walking. They are not in any sense a treatment for the disease that is causing the symptom. Though of great value, therefore, as a means for improving the walking or the use of the arms if these are involved, they cannot replace the treatment directed toward the cure of syphilis. They will not cure locomotor ataxia.

The principle involved in all these systems of exercises is that of teaching the patient to use his eyes to direct his movements in place of the awareness he normally has of what is taking place in his muscles. The nerves that convey the information from the muscles, the muscle sense nerves, suffer markedly in locomotor ataxia so that the person loses his ability to direct his movements. With practice he can learn to use his eyes for the purpose and thus relieve materially the ataxia.

The selection of the best method for treating the syphilitic infection and the form of exercise most appropriate for any particular patient require expert study, for it must never be forgotten that the physician tries to treat the patient rather than merely the disease from which he is suffering. Every competent nerve specialist is familiar with the questions involved in these selections and the wise plan is to ask the family physician what particular specialist should be consulted. As has already been pointed out, the treatment must often be prolonged and the best results can be secured by cooperation between the specialist and the family physician.

Symptoms of Pregnancy in Nursing Mother

To the Editor:—When a mother becomes pregnant what are the symptoms if she is still nursing a three months old baby? W. H., New York.

Answer.—The symptoms of pregnancy that may occur in a three months' nursing patient may be slight. However, she is apt to feel some change in the desire for food; often a distaste for food. Nausea or vomiting may or may not be present. There are usually bladder symptoms, such as frequency in passing urine. An indefinable sense of feeling different than before also exists.

A physician may have difficulty in detecting pregnancy at the first examination. There is usually no effect on the nursing child.

Quartz Lamp Treatment for Hay Fever

To the Editor:—Can you give me any information about the quartz treatment for hay fever? It is being recommended as better and newer than the serum inoculation. All I have been told is that it is a kind of light, or ray, applied over the nostrils. I have a 12 year old child with asthmatic hay fever and before I subject her to anything new I would appreciate your opinion, as I know absolutely nothing about the merits of this light treatment. M. L. B., New York.

Answer.—By the quartz lamp treatment is meant the application of a powerful light, the beams of which, transmitted through quartz instead of through glass, contain the ultraviolet rays as well as the visible light rays. These do affect the superficial cells, but their penetrating power is slight. The evidence that the quartz lamp treatment is curative of asthma or hay fever is still too inconclusive to warrant our advising its use. The matter is in an experimental stage with the burden of proof still on the experimenters.

CURRENT HEALTH ITEMS

WARNS AGAINST "POP" AS HOME AND SCHOOL BEVERAGE

Milk and fruit juices are the proper beverages for children. Recently certain individuals have advocated placing "pop" on the school and home menu, along with milk and fruit juices. They favor carbonated beverages for three reasons: (1) Much water and home-made drinks are insanitary, whereas bottled goods are safe; (2) carbonated drinks contain from 0.4 to 0.9 ounce of sugar per bottle, and therefore compare in food value with most watery fruits and vegetables; (3) carbon dioxid is a valuable digestive stimulant.

In answer to these arguments, Miss Hannah A. Stillman of the home economics department, University of Missouri, writes the *American Journal of Public Health:* "Water is so easily purified that it seems unnecessary to quote statistics on it in the unpurified state. The food value of bottled drinks is due almost entirely to the sugar they contain. Five or ten cents for a half ounce of sugar is a great price to pay. Proteins, minerals and vitamins are abundant in fruits and vegetables and are entirely lacking in 'pop' so that even though their calorie value may be the same, they do not have the same food value.

"Carbonated beverages with natural fruit flavor should not be confused with bottled concentrated fruit juices. The latter contain minerals and some water-soluble vitamins, but these nutrients are entirely lacking in the majority of bottled beverages, which are made of a sugar syrup and an alcoholic extract carrying the fruit flavor. A large number of these drinks contain caffein.

"A great moral responsibility rests upon any one who tries to persuade a child to substitute sweetened, artificially colored and flavored beverages, some drugged with caffein, for the growth stimulating and tissue building foods now in use," Miss Stillman concludes.

OVERCOMING JEALOUSY IN CHILDREN

The birth of a baby sister or brother frequently puts the first child's nose out of joint. This is not to be wondered at, says Dr. Douglas A. Thom in a recent Children's Bureau publication on child management, when it is remembered that the mother is devoting practically all of her time to the intruder.

Often before a new baby arrives, the child has been through a period of worry and upset. He may have been sent away during the mother's confinement, or he may have been left alone while his mother is at the hospital. Why has mother left him? Will she really come home again? Then she comes, but not with undivided attention for him.

This attitude toward the new-born baby can invariably be overcome, says Dr. Thom, if the older child is confided in and told that he may expect a new little brother or sister. He then awaits its arrival with interest and pleasant anticipation. Handled wisely, what might be a most unpleasant event in his life becomes a real pleasure which will mean companionship and a new playmate, some one to care for and protect.

Parents make a mistake when they praise or hold up a brother or sister as a model to the other children, Dr. Thom declares. Nothing is more disastrous than playing the merits and abilities of one child against those of another. It causes feelings of bitterness, resentment, inferiority and inadequacy. No family is big enough to play favorites or show partiality.

Dr. Thom declares that if a child can be taught habits of unselfishness in the home, where his personal attachments are strongest and where he would naturally have more provocation to jealousy, and can learn to meet successfully the situations that develop there, he will encounter little or no difficulty from this emotional handicap when he gets outside. It is the jealous child who becomes the jealous man or woman.

CLASSES FOR THE NEAR-SIGHTED

Special schools and special classes for near-sighted children have been established throughout London. To these classes go children whose eyesight is too bad for regular classwork but who are not so nearly blind as to require teaching by sightless methods.

N. Bishop Harman, senior ophthalmic surgeon to the West London Hospital, describes these classes in the April number of *The Child,* a child welfare magazine published in England.

Mr. Harman thinks that children with eye defects should be taught, as far as possible, in special classes in the ordinary elementary schools so that they may mix with children with normal sight. Much of the instruction should be individual or in small groups, and books, pens or pencils should not be used by children in the class under any circumstance.

Such writing as they need to do may be done on blackboards in free-arm fashion, with the chalk at full arm's length. Writing by both teacher and pupils should be extra bold and large.

Oral instruction is best received in rooms with normal children, and singing and physical exercises should also be taken with normal children, Mr. Harman believes.

Taking books from the school library should never be allowed the near-sighted child, says the London surgeon. Reading is too great a temptation for him and it should be avoided habitually. The child's chief interest should be made an outdoor interest; then his demand for books will be diminished.

THE HIGH COST OF BABIES

Interesting to both parents and doctors is Ida L. Albright's article on "The High Cost of Babies," which appears in the *Atlantic Monthly* for May.

Mrs. Albright has four babies and their combined cost has been enormous. Whereas, the family doctor charged her parents $10 for his services at her birth and the nursing services of Aunt Lindsay cost $5 and a basket of fruit, the Albright children cost all the way from $135 to $400 each for specialists' fees and hospital and nursing service.

The writer wonders what will be the solution of the cost-of-babies problem in the middle class family. She has a few suggestions of her own and invites those of parents and physicians.